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# Validation of the Virtue Ethics Importance Scale

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Validation of the Virtue Ethics Importance Scale

by

Jennifer Chandra Swaim

A dissertation submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Psychology (Counseling Psychology)

Program of Study Committee:  
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Iowa State University

Ames, Iowa

2004

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## ABSTRACT

This dissertation presents a number of empirical investigations and analyses conducted on an original measure, the Virtue Ethics Importance Scale (VEIS). The VEIS is intended to measure individual's beliefs regarding four of the virtue ethics, benevolence, integrity, prudence and respect. Psychometric data indicating the strength of the instrument are presented. These data and accompanying analyses include the internal consistency reliability, test-retest reliability, and evidence for both convergent and divergent validity consistent with theoretical expectations. The impact of social desirability on VEIS responses is discussed. Analysis of the wmeasures of participant responding are evaluated, and the case is made for the reduction of the measure to a shorter form. Analyses are presented for the reliability and validity indices of this short form. Factor analyses are presented for both the long form and short form of the questionnaire, and the findings from all analyses are discussed.

## INTRODUCTION

The dissertation presented describes the continuing development and psychometric evaluation of Virtue Ethics Importance Scale (VEIS). This body of research builds upon previous research conducted by the author (Swaim, 2001). To date, no empirical investigation of the virtue ethics has been reported in the professional literature. This dissertation is innovative in that it extends the concepts of virtue ethics beyond their current state of abstract theory. This goal is achieved through the development of a self-report measure to assess four virtue ethics constructs, thus enabling further future research endeavors by those investigators interested in this and related subject areas.

Ethical thoughts and behaviors are complex processes that involve an individual's history, patterns of thinking, and conviction to hold to his or her ethical standards. The prior research on which this project builds, the author's master's degree thesis, was to develop a self-report questionnaire, a Virtue Ethics Importance Scale (VEIS). This scale is designed to assist in attempts to explore the ways in which people think about a specific subset of ethical constructs called virtue ethics. Virtue ethics, in contrast to the principle ethics that are more commonly referred to by professional psychologists, are concerned with the Aristotelian concept of "who shall I be?" rather than on the more specific focus of "what shall I do?" (Miller, 1991). In virtue ethics, the emphasis shifts from using ethical principles as a dilemma solving tool to an internal focus, one which emphasizes the characteristics and values of the personal agent who must take action in a situation. Developing a self-report questionnaire to evaluate the characteristics and

values of the individual as they regard to the four virtue ethics under investigation is the purpose for the creation and validation of the VEIS.

A brief introduction pertaining to the development of such a measure will be followed by information relevant to ethics and individual differences. Following this presentation, definitions and characteristics of the four virtue ethics under investigation will be presented. Subsequent sections of this document will present in sequential order, a review of the central reliability and validity issues taken into consideration during scale development, a summary of the previously conducted research, and an outline and explanation of the modifications made to the measure since its previous iterations. Finally, the specific objectives of the studies contained within this dissertation will be presented.

### The need for Virtue Ethics instruments

There are numerous reasons to develop a measure such as the VEIS. The primary one is that similar scales and empirical investigations based upon a validated research instrument do not yet exist for these constructs. There is a clear need for this type of instrument within the field of ethics, and there is an impetus for further investigations coming from funding sources, as well as from psychological researchers and theorists. The VEIS will serve to augment areas in which researchers have minimal empirical knowledge, a void which is there primarily because of a lack of adequate instrumentation. There is a clear call to investigate the issues of virtues and ethics from numerous sources; perhaps, most importantly, one finds that they are now coming from those who fund psychological research:

The funders, the NIMH and Congress, are now thinking more seriously and with more dollars about prevention, but as they think about this, they suddenly discover that it looks like the great preventative things for mental illness are the virtues: honesty, work ethic, persistence, courage, interpersonal skills. In this rush to cure mental illness, we forgot to learn about the virtues...To think seriously in our research and our practice and in clinical science about the virtues. (Seligman in Morgenson et al., 1999, p. 109)

Ethics, as an area of inquiry regarding the individual as well as the professional practitioner, are important to study. Ethics play a role in a person's daily life. Whether the individuals considering the appropriateness of their actions are using ethical terminology or not, nearly all people have internal guiding principles which help to shape behaviors and thoughts. Yet there has been little research to help us understand how it is that people contemplate these matters. Part of knowing the self involves understanding how one thinks ethically, and developing a sense of why it is that one interacts with others along these certain guidelines. "One cannot develop a sense of community without the capacity for self-observation, that is, knowing one's assumptions, convictions, and biases and how they are likely to affect one's professional and personal interactions with others" (Meara et al., 1996, p.31).

#### What are the Virtue Ethics?

The seminal publication regarding virtue ethics, *Principles and virtues: A foundation for ethical decisions, policies and character* (Meara, Schmidt & Day, 1996.) described the concept of virtue ethics, and argued for the incorporation of four virtue ethics into the professional lives of psychologists, in addition to continued use of

principle ethics. Through this article, they hoped to stimulate both thought and empirical research.

Virtue ethics focus on character traits and nonobligatory ideals that facilitate the development of individuals. Virtue ethics are a complement, rather than a contrast, to the principle ethics which are obligations which one considers (perhaps even consciously) when one is confronted with an ethical dilemma. Numerous sources have indicated that the focus of virtue ethics lie within the individual, a pattern of characteristics within the psyche of that individual which lead to a process of ethical decision making, as opposed to being focused on the actions taken or the decisions that are reached by an individual (Meara et al, 1996). The current research is designed to develop an initial starting point from which psychology can begin to investigate these patterns of characteristics as they influence ethical decisions. Benevolence, integrity, prudence and respect are the four virtues that were selected by Meara, Jordan & Day (1996) as the ones of primary research importance in a direct investigation and discussion of virtue ethics. Table 1 contains the operational definitions for each virtue construct

Table 1. Virtue ethics definitions

Construct	Definition
Integrity	Trustworthiness, honor, honesty, adhering to a code of moral values, truth to oneself
Benevolence	Kindness, altruism, caring, empathetic compassion, mercy
Prudence	Knowledge from available sources, rational decision making, thinking before acting, holding back, warranted caution
Respect	Common courtesy, honoring, considerate, deference, upholding another's beliefs, being dutious

### Reliability and validity considerations

An essential consideration in the development of an instrument is reliability, a necessary component to any form of measurement, in fact it is the foundation upon which the rest of the psychometric properties of the instrument lie. In the absence of acceptable reliability within a measure, meaningful validity of a test or measure will not exist.

Reliability can be conceived of as the variance in scores that is due to true differences among individuals (Heppner, Kivlighan & Wampold, 1994, p. 284). If the final version of the VEIS lacks sufficient reliability, then one's understanding of the relationships between the constructs will be limited by the degree to which the measure is unreliable.

Due to the somewhat abstract nature of the four constructs under investigation, as well as the degree to which individual differences may impact participant responses, there is a strong possibility that the degree of variability between subjects could be substantial.

Without sufficient reliability, we would be unable to determine if the variation is truly a reflection of individual differences, or simply a representation of uninterpretable measurement error. Thus, assessing both the internal consistency, as well as the test-retest reliability of the VEIS are important goals of this study

The VEIS presents a number of questions within each of the four constructs to attempt to ensure that the full breadth of these particular ethical domains are assessed. In considering reliability issues, it is important to remember that though an attempt to ensure that concept domain sampling is adequate through the use of multiple questions for each dimension, an individual may not think that certain aspects of one of the virtues are as important as another aspect of the same virtue. By using multiple items to evaluate the

same construct, the developers of the VEIS are attempting to control for the effects of one or two random responses on the total score (Heppner, Kivlighan & Wampold, p.285).

Even with these precautions, individuals may think of themselves as highly benevolent individuals, but for some set of reasons unanticipated by the researchers, may choose to not value any of the behaviors that we have chosen to sample in our questionnaires. Thus one of the goals of this investigation is to minimize items which tend to elicit high amounts of irrelevant variance in participant response. In this project the key reliability measures will be based on internal consistency by assessing the homogeneity of theoretically related items. Again, it is important to consider that there is considerable variation between individuals about what comprises ethical behavior in any given situation, and the internal cognitive schemas which frame any given item on the VEIS will likely affect response patterns.

Particular care was taken in every stage of this survey's development to ensure that both reliability and validity of the final VEIS measure could be maximized as much as possible. However, ethical constructs are extremely difficult to measure for a number of reasons. Furthermore, the constructs under investigation do not lend themselves easily to operational definitions, or clear translation into a restricted set of behaviors common in everyday life. Because of these challenges, a number of validity issues require attention.

Perhaps the most salient issue to be addressed here is one of internal validity: Are we consistently measuring what we are intending to measure? Also important to consider are issues of construct validity. Has the measure accurately captured the constructs of interest? It must be considered that individuals do not always think clearly about ethical



issues, and this dissertation focuses on a 'test' of one's level of adherence to their own personal codes of virtue. Many individuals may have never, or rarely, experienced such a test, or for a myriad number of other reasons had little motivation or reason to examine their ethical beliefs. Thus, considerable effort has been made to convey clearly the researcher's concept of these four virtues in understandable items to which participants can respond. For similar reasons, in the instructions given to individuals taking the measure, participants are encouraged to think about these questions as issues of personal importance, as opposed to issues of virtuous thought and behavior. The goal of these efforts at masking the true nature of the measure is to minimize the impact of social desirability responses.

In ethical response questionnaires, social desirability is a very relevant issue. Some researchers, such as Tooke and Ickes (1988) suggest that measures of moral or ethical judgments may be hopelessly confounded with social desirability. Welfel (1992, p. 184) cautions investigators about the necessity of veiling the intent of measures examining ethical issues; "To assess ethical sensitivity one must not cue the respondent to the presence of an ethical problem. Thus, paper-and pencil instruments that instruct respondents to address the ethical issues in the items cannot assess ethical sensitivity directly." These considerations play a significant role in the rationale for using behaviorally anchored items, with responses keyed to what is important to an individual. It does appear that in large part this method of item presentation has been successful in terms of masking the actual purpose of the measure. In the first series of studies conducted on this measure (Swaim, 2001), 172 respondents were asked to try and

identify the nature of the measure. No individuals identified the questionnaire as one that was evaluating ethical constructs, and only 15.6% identified the measure as one evaluating the closely related constructs of values or morals.

### Challenges in assessing Virtue Ethics

There are numerous difficulties in developing a measure that can consistently measure these four virtue ethics. Ethical thought patterns are subject to change through experience, and they are challenging constructs to evaluate at any given point in time; “Integrity cannot be judged on the basis of a single situation, it involves coherent integration over time” (Meara et al., 1996). Thus one must remain mindful that the results of these explorations reflect the way in which a person conceptualizes these virtues at a given point in time, not a pattern of their past beliefs, nor an absolute indication of their future beliefs. While it is hypothesized that virtuous beliefs are trait-like in their stability over time, the limitations of this dissertation and experimental design will not permit the evaluation of the extent to which these four virtue ethics ratings are stable temporally as character traits.

Crucial to understanding the usefulness of a measure is knowledge of the degree to which it measures what one is intending it to measure. The standard approach to evaluating this is through the establishment of convergent and divergent validity patterns. Convergent validity studies address the degree to which the constructs and items of the scale under construction “converge” or share variance with items known to evaluate the construct. Typically these are taken from other published, validated measures that

evaluate the same construct. For this body of research, this represents a particular challenge. The foremost rationale for creating and evaluating the VEIS is that no similar measure exists; in fact no known measure to investigate these constructs or the virtue ethics in general has been published to date.

It is expected that there is some degree of overlap between moral reasoning and ethical beliefs, hence convergent validity will be in part evaluated through the concurrent administration of a measure of moral reasoning, the Defining Issues Test (DIT; Paulhus, 1988) with the VEIS. There is also a measure currently under development, the Values In Action measure (VIA; Peterson, 2001) which was included. Originally designed as a questionnaire with ten scales, four of these scales range from moderately to closely related, in theory, to the four scales on the VEIS, and contain items that appear to assess the same, or closely related constructs. The anticipated convergent scales are: Integrity/Honesty, Prudence, Kindness/Generosity and Citizenship/Teamwork, and These scales will be administered to evaluate the degree of correlation between theoretically similar scales.

Similar reasoning was used in the selection of items to evaluate divergence, or the degree to which the items on the VEIS are expectedly different from items on another measure. The VIA contains a total of ten subscales, and from the six not clearly closely related to those on the VEIS, the four that seemed most dissimilar (or unrelated) from this questionnaire were selected for administration. These scales were entitled Personal Intelligence, Modesty/Humility, Appreciation of Beauty and Self-Regulation by the VIA creators.

Another important consideration relates to the external validity of this scale. This measure has been developed primarily on Caucasian college students, which implies that the sample is limited in terms of its diverse application to factors such as age, ethnicity, and socioeconomic status until further validation studies can be conducted. Because of these considerations, this research may result in a survey which is unsuitable for a general population which is more culturally diverse. As this instrument is being developed primarily as one to be used for research purposes, future investigators utilizing this measure should pay careful attention to the characteristics of the validation samples presented in these studies, and consider how the demographic characteristics of their sample may impact response patterns.

#### Summary of previous investigations

The goal of the investigator's master's research was to develop the Virtue Ethics Importance Scale (VEIS) to aid in investigations of individual's beliefs about virtue ethics. In this thesis research, the possible existence of internal consistency in the way in which individuals rate the importance of behaviors which are directly related to four of the most clearly formulated virtue ethics: prudence, benevolence, integrity and respect was explored.

The research presented in the master's thesis included details regarding the development of the measure as well as three separate empirical studies: a pilot study, a large sample data collection study, and a smaller data collection including a large number of items. Through these three stages the focus was on improving the format of the measure, reducing the number of items to the most meaningful set of questions, and

examining participants' subjective reactions to the measure. The investigations were designed to primarily be quantitative analyses, focusing on basic descriptive information and internal consistency reliabilities for the subscales on the VEIS. Furthermore, factor analyses were conducted for the purpose of examining the structure of the items to evaluate the factors' degree of similarity to theoretical expectations. Additionally, qualitative data were collected and examined to more fully understand the effectiveness and relevance of items, as well as the transparency of the measures' purpose. It was also of interest to see if there would be any potential negative psychological reactions associated with completing the measure.

The results generally indicated strong subscale reliability. It was also demonstrated that order effects did not have a significant or detectable impact on participant responses. Evidence was found for a factor structure consistent with the four factor structure predicted by the theory. It was also found that participants did attend to items and discriminate between their responses. The qualitative data collected indicated that participants are unlikely to experience psychological discomfort as a function of completing this measure. Furthermore findings indicated that using reverse coding was likely overly cumbersome in this project, and evidence to use a different method for ensuring participant discrimination of responses was proposed at the end of the thesis in the conclusions segment. The reader interested in further detail regarding these studies is encouraged to consult the actual thesis (Swaim, 2001), as it provides both a conceptual and empirical basis for this dissertation research.

### Objectives for this study

The objective of this dissertation study is to complete instrument validation and reliability analyses on the Virtue Ethics Importance Scale (VEIS), and to evaluate its potential usefulness as a psychometric instrument. To complete this task, additional data, separate from that obtained for the master's thesis, was collected on new groups of participants, and additional measures were included and analyzed.

There are a number of crucial considerations associated with the development of any psychometric scale. The most pertinent in this project include studies to assess internal consistency of the scales, to establish the test-retest reliability of the measure as well as to explore the convergent and divergent validity associated with the measure. Furthermore, because of the nature of individual's tendency to modify their responses to appear socially desirable, it is crucial for this type of measure to assess the degree to which this tendency may have on individual's responses.

Additionally, an individual's stage of moral reasoning may indicate how individuals approach decisions involving the use of the four virtue ethics under current investigation. Given this assumption, one question of interest is whether there is a detectable relationship existing between an individual's stage of moral reasoning and the degree to which they endorse items on the VEIS.

Also of interest is evaluation of the degree to which respondents make specific distinctions among items. Infrequency items were created and included in this version of the VEIS as a measure of extreme responding. This approach was implemented because the data from the prior thesis study, a method of reverse wording of selected questions,

produced inconsistent results. To try and evaluate whether participants are discriminating in their responses, two new approaches were implemented and evaluated. One approach to the assessment of extreme responding is to present items which a participant is not likely to provide an affirmative response. Examples of these questions include “Volunteer at least 30% of your time or money to charities” and “Shuffle playing cards before taking an exam”. If endorsed, this would indicate that participants are not fully attending to the measure, or for some other reason not providing accurate information. Certain responses can be compared with other questions within the VEIS to ensure that participants are truly discriminating between responses. An example of such a matched pair would be “Volunteer at least 30% of your time or money to charities” and “Contribute a little of your time and or money to a worthy cause”. The carefully discriminating respondent would be expected to show different degrees of agreement to these items. Additionally, in the analyses, these paired items can be matched with other items in the administered questionnaires to evaluate participant’s response consistency. The reverse coded items approach has been significantly expanded in this iteration of the VEIS. The size of the questionnaire has been nearly doubled through the addition of a complete set of reverse-worded items for each construct.

Finally, it is of interest whether the factor structure observed in the Master’s studies, based on exploratory factor analyses can be replicated through a confirmatory factor analysis. To this end, large sample data collection through department of psychology scale validation data collection will be performed.

In summary, the questions addressed in this body of research include:

- What is the test-retest reliability of the VEIS?
- What are the convergent and divergent characteristics of the VEIS when compared with another measure of values (the VIA), and a measure of moral reasoning (the DIT-2)?
- How does social desirability affect responses on the VEIS?
- How are individual's responses on the VEIS related to their stage of moral reasoning?
- Are infrequency or reverse-coded items effective in detecting participants who are discriminating between responses on the questionnaires?
- Can the factor structure obtained during previous investigations of this measure be replicated?

These questions are addressed through data gathered in two different studies.

Research participants came from one of two groups of volunteers from the Department of Psychology Research Participation Pool. The first group (presented in study 1), students who signed up for studies via the subject pool bulletin boards, participated in two sessions (Data Collection 1 and Data collection 2). In addition to data relevant to inter-item reliability and validity evaluation, this design enabled the collection of information pertinent to test retest reliability. The second group also used participants from the Psychology department, but in Study 2, students who elected to participate in the mass testing data collection were utilized. This enabled the collection of sufficient data to conduct the factor analyses.



### Rationale for Selection of Measures

Divergent and convergent validity analyses were conducted by examining the size and pattern of correlations between the VEIS and one established measure of ethical decision making, the Defining Issues Test 2 (DIT-2) and one measure currently under development at the University of Pennsylvania, the Values in Action Questionnaire (VIA). Test-retest stability was evaluated by through the readministration of the VEIS. Socially desirable responding was evaluated using an established measure, the Balanced Inventory of Desirable Responding (BIDR). The guiding questions for this body of research can be answered using these three measures, with varying approaches and combinations of analysis. Information regarding the available psychometric properties of each instrument, as well as more detailed descriptions of each questionnaire, are addressed in the Methods section of Study 1 below.

## METHODS

### STUDY 1

#### Participants

One hundred seventy three participants, from a total retained sample of 190, elected to provide their age, and of these participants, the mean age was 20.25 years of age, with a standard deviation of 6.59 years. Male participants ( $n = 59$ ) represented 31.1% of the final sample, and 59.5% ( $n = 114$ ) identified themselves as female ( $n = 17$ , or 9.5% did not provide sex data). Eighty four percent of respondents ( $n = 160$ ) identified themselves as US citizens, and 5.8% ( $n = 12$ ) reported not being citizens (10%, or  $n = 18$ , did not provide data). Eighty five point three percent of respondents speak English as their primary language ( $n = 162$ ), 4.7% claimed a different primary language ( $n = 10$ ), and 10% ( $n = 18$ ) did not provide data. While ethnicity data were not collected, it would be reasonable to assume similar ethnicity proportions in this sample as were obtained in Study 2 (see Table 3 for those data).

#### Instruments

This *Values In Action* measure (Peterson, 2001) purports to evaluate positive character traits, such as character strengths and virtues that are valued in the contemporary United States. This questionnaire is being used to help develop a categorization system of human strengths and virtues, with the end goal of developing a measure that will assist in the investigation of these qualities. It is a 220 item measure, with 10 questions per construct in the following domains: kindness/generosity; curiosity/interest; judgment; originality; personal intelligence; perspective; valor; industry/perseverance; integrity/honesty; capacity to love and to be loved;

citizenship/teamwork; equity/fairness; leadership; self-regulation; prudence appreciation of beauty; gratitude hope/optimism; spirituality; modesty/humility; humor/playfulness; zest/enthusiasm; forgiveness. Because of the length of this measure, and because only segments are related to this research endeavor, four theoretically convergent constructs, and four from which one would expect divergent results from were selected for incorporation into this study. The subscale titles that are considered to be somewhat convergent, and will be analyzed accordingly include: prudence, kindness/generosity, integrity/honesty; and citizenship/teamwork. The subscale titles that are considered to be somewhat divergent, and will be analyzed accordingly include modesty/humility; appreciation of beauty; personal intelligence; self-regulation.

The *Defining Issues Test* (Rest & Narvaez, 1998) measures how people reason morally about social problems, and classifies them according to their moral stage of development consistent with Kolberg's conceptualization of the stages of moral development. The sequential stages of moral development are presented below in Table 2 and are adapted from Kohlberg (1964):

Table 2: Kohlberg's Stages of Moral Development

Stage		
Level I: Preconventional	1	Obedience/ punishment
	2	Egoistic self-needs
Level II: Conventional	3	Approval
	4	Authority/ duty bound
Level III: Postconventional	5	Contractual/ legalistic
	6	Individual principles of conscience

This measure is widely used in investigations of moral reasoning and in ethical decision making it is employed to assess an individual's stage of moral development. It has been shown to have sufficient reliability (Chronbach's alpha and test retest in the ranges of high .70-low .80's) and has been demonstrated as equally valid for males and females.

The *Balanced Inventory of Desirable Responding* (Paulhus, 1988) is a 40-item self-report instrument that measures the tendency to give socially desirable responses. It is useful in identifying individuals who distort their responses and for evaluating the honesty of their responses by measuring two major forms of socially desirable responding: Impression Management (IM) and Self-Deceptive Enhancement (SDE), which are factor derived, relatively homogeneous scales. The IM Scale (20 items) provides information on the tendency of some respondents to consciously respond to items in an attempt to appear favorably to whoever interprets their results. The SDE Scale (20 items) provides information on the tendency of respondents to provide self-profiles due to an overly confident, yet inaccurate, self-regard. This measure has internal reliability coefficients ranging from .83 to .86 (Paulhus, 1988). Examining each scale individually, studies reported by Paulhus (1991) have shown coefficient alphas in the range of .68 to .80 for the SDE scale, and from .75 to .86 for IM. The validity of the IM and SDE scales has been extensively studied and shows that each scale measures distinctly separate concepts and together correlate as high as .73 with similar instruments, such as Eyesenck's Lise scale and the MMPI lie scale (IM) and with Byrne's R-S scale and Ihilevich and Gleser's Defense Mechanisms Inventory (SDE) (Paulhus, 1991 p.38).

### Procedure

All data collection procedures were conducted with volunteers and in a manner consistent with existing American Psychological Association, Iowa State University, Department of Psychology, and Iowa State Institutional Review Board (IRB) guidelines to ensure the welfare and integrity of participants. The projects were reviewed and approved by the Iowa State University Human Subjects In Research Committee (see signed IRB forms presented in Appendix A). Participants initiated involvement in the study by voluntarily signing up on research posting forms in the Psychology Department, which offered various times and locations for participation. Once participants arrived in the classroom testing location, the investigator provided them with extra credit cards. The investigator then provided participants with an informed consent statement (Appendix C) which they were asked to read and sign, if they wished to continue with their participation. After collecting the informed consent statements, the investigator checked to verify that they had been signed, and then signed them where appropriate for the researcher signature. Following these procedures, the questionnaires specified above were distributed, and participants were told that they could begin responding to the items in the packets.

At the first data collection session, participants were given a packet of measures to complete containing 277 total items, consisting of the following questionnaires: The Virtue Ethics Importance Questionnaire (VEIS), The Defining Issues Test (DIT-2), Modified Values in Action Questionnaire (VIA), and The Balanced Inventory of Desirable Responding (BIDR-6). All questionnaire packets were presented in the same

order as follows: BIDR-6, VIA, VEIS, DIT. Copies of these measures can be found in Appendix B. Once the participant completed filling in the questionnaires (or elected to discontinue participation) the investigator provided each participant with a pre-printed debriefing statement, which concluded the first session.

Potential participants from session one were later contacted by one of the researchers via telephone and asked to participate in a second research session. Potential participants included any individual we were able to contact via telephone who had participated in the first data collection session. For those individuals who chose to participate in the second session, the investigator provided them with their extra credit card and informed them of their entry in the drawing for one of four \$20 prizes when they reported to the testing session. This procedure was used as an incentive to encourage participants to return for the second session. Following this introduction to the drawing, the investigator provided participants with an informed consent statement and requested that they read it, and if willing to participate, to sign the consent statement. The investigator then distributed the questionnaires specified above and told them they could begin responding to the items in the packets. The packets include the VEIS, and the VIA. Both instruments were identical to those completed in the first session. Once the participant completed filling in the questionnaires (or elected to discontinue participation) the investigator provided the participant with a pre-printed debriefing statement. This concluded the testing session for participants in the second testing series.

## STUDY 2

### Participants

In order to gain a large enough sample of subjects to conduct all of the relevant analyses, the mass testing participant pool was utilized. Data for the scale validation portion of the research was collected in the Spring of 2003 through the Iowa State University Department of Psychology Scale Validation Research Pool. There were a total of 432 participants, and of these participants, 24 cases were removed from due to incomplete responses, leaving 408 usable cases. Due to testing limitations, this sample was smaller than originally desired. To increase statistical power, participant responses on the VEIS scale from Study 1 were added to those from scale validation. In the merged data, 11 cases were removed for incomplete data, resulting in a total of 611 participants used in the analyses relevant to this data set. The demographics noted below were calculated on these 611 participants included in this merged data from Studies 1 and 2. Two hundred forty nine participants (40.8%) identified themselves as male, and 325 (53.2%) identified themselves as female. Sex data was not provided by 37 individuals, or 6.1% of the overall sample. The mean age of the 512 participants (84%) who provided age data was 20.25 years of age ( $SD = 1.74^1$ ), with a range between 18 and 42 years of age. Ethnicity data is only available on a subset of the responses, those obtained from the mass testing data collection (68% of the merged sample). Table 3 shows the ethnic composition of the sample.

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<sup>1</sup> Unless otherwise noted, all analyses were conducted using SPSS version 9.0 or 10.0.

Table 3: Ethnic composition of sample used in Study 2 analyses

Ethnicity		
	Frequency	Percent
Caucasian/ White	378	61.9
African-American/ Black	17	2.8
Latino-American	6	1.0
Asian-American	4	.7
Multi-Racial American	4	.7
Native- American	2	.3
International Student	6	1.0
Other	3	.5
(Missing)	191	31.3
Total	611	100.0

### Instrument

In this study session, only the VEIS instrument was administered due to space limitations regarding the number of items any individual researcher may include during Scale Validation data gathering sessions. The version of the VEIS administered was identical to the version administered in the previously presented study. A copy of the questionnaire is provided in Appendix B.

### Procedure

Participants voluntarily chose to attend a two point extra credit data collection session. In this testing session, all subjects completed a packet of questionnaires at the same time. Further written instructions regarding the completion of the VEIS was located just before the questionnaire :

*Please read the scale and each question carefully. In this questionnaire we are interested in knowing more about **how important you think it is for you to act** in a given situation. Many of the situations are similar to one another, so please choose your responses carefully, and try to consider whether or not the behavior described is genuinely important to you or not. Please fill in the corresponding numbers on the bubble sheet using the following scale:*



- 1 = I think it is very important for me to never act in this way
- 2 = I think it is important to refrain from acting this way most of the time
- 3 = I think it is important for me to not act in this way some of the time
- 4 = I don't think my behavior in this type of situation matters to me at all
- 5 = I think it is important for me to act in this way sometimes
- 6 = I think it is important for me to act this way more often than not
- 7 = I think it is very important for me to act in this way all the time

## RESULTS

### Data Retention Criteria

Criteria for retention of subject data were set to be moderately stringent.

Participant data from subjects was omitted from analyses on the basis of a number of inclusion criteria. If participants did not provide sufficient responses for the calculation of more than one of the subscales on the VIA or the VEIS the data was omitted from analyses. If data for one subscale was missing from the BIDR data, and an additional criteria for exclusion as described above was met, then data were omitted.

Additionally, the DIT-2 contains a number of reliability checks, which could have omitted up to 14% of our sample on the basis of stringent exclusionary criteria as set by the DIT-2 publisher. In order to retain a greater number of subjects, the exclusion criteria were relaxed slightly, resulting in a loss of only 5% of the subjects due to responses appearing to result from random responding, excess missing data, or nondiscrimination of items (Rest, Navarez, Thoma & Bebeau, 1999).

Finally, inconsistencies in identification numbering or unusual response patterns resulted in exclusion of the data from the analyses. Examples of these types of criteria include responses from an individual who continued numbering where there were not questions present, and double-numbering of packets.

Using the most stringent of criteria, any missing data at all resulting in the noninclusion of subjects, and violation of the DIT-2 reliability checks, 25% of the data would have been lost. Using the criteria as outlined above, a total of 31 sets of data were removed from the initial set of responses, which represents a loss of 14% of the overall

data originally collected. Of these 31 removed, in 8 cases more than one exclusion criteria as outlined above was met, indicating a high probability that participants were not carefully attending to items, provided incomplete information, or chose to provide false information.

All analyses other than those conducted on the mass testing data sample are based on 190 sets of data collected according to the procedures outlined for Study 1 (representing 87% of the overall sample where  $n = 217$ ), and which survived the data refinement procedures outlined above. Retained subjects in the mass testing sample represents 97% of the originally collected data ( $n = 432$ ). In some cases individuals did not provide non-crucial data, such as age or gender. Such exclusions are noted on a case by case basis in the  $n$  counts for each statistic.

In order to provide results in a manner with the most logical sequence of presentation, they are presented collectively, without delineating the results into the data collection sessions. Careful attention to sample size, provided with each set of statistics, will indicate the particular study on which the results are based. Numbers in the 180-200 subject range originated from Study 1, Data Collection 1 in which individuals completed the VEIS, BIDR-6, VIA and DIT in one session. The small sample, including approximately 60 participants, represents those individuals who participated in the test-retest study portion of Study 1, Data Collection 2. The largest sample, including 611 participants originated from combining the VEIS data between the participant responses from Studies 1 and 2.

### Descriptive Data and Normative Information

The VEIS item means and standard deviations are presented in tables 4-7 below. Also included in the tables are the number of respondents answering each item in the total sample, as well as the range of scale points endorsed for each item. Please note that the response scale was from 7 to 1 on the questionnaire.

Table 4: Benevolence subscale means and standard deviations

Benevolence				
	N	Range	Mean	SD
1. Be pleasant with peers even when they are not pleasant with you.	611	6.00	5.26	1.34
7. Help others without expecting anything in return.	610	6.00	5.72	1.26
14. Treat people kindly even when you are having a bad day.	611	6.00	5.64	1.21
23. Volunteer even if it isn't always very convenient.	611	6.00	4.98	1.22
25. Carefully consider the needs of others.	611	6.00	5.76	1.11
33. Be generous to people you think need your assistance.	610	6.00	5.84	1.07
35. Treat others as you would like to be treated.	611	6.00	6.26	1.09
36. Feel irritated when other people act like they need your help.	608	6.00	5.44	1.37
42. When someone yells at you, yell right back at them.	611	6.00	4.96	1.45
46. Always take care of your own concerns before those of anyone else	611	6.00	4.64	1.46
50. Feeling irritated when other people seem to need your help.	611	6.00	5.54	1.30
54. Only help others when you have the time	609	6.00	5.08	1.42
60. When things go wrong take it out on those around you.	609	6.00	5.99	1.21
64. Acting unusually kind to someone only because you want something from them.	611	6.00	5.36	1.36
69. Only volunteer for someone who can also help you.	611	6.00	5.73	1.25
73. Making sure you take care of yourself before anything else is considered.	611	6.00	4.05	1.57

Table 5: Integrity subscale means and standard deviations

Integrity				
	N	Range	Mean	SD
8. Strictly uphold all aspects of academic integrity.	610	6.00	5.62	1.24
9. Return incorrect change.	611	6.00	4.72	1.89
11. Holding to an external moral code (such as the boy scouts, honor codes, etc.)	611	6.00	4.62	1.49
19. Always tell the truth.	611	6.00	5.64	1.26
20. Returning (or making the best effort to do so) a found wallet.	610	6.00	6.19	1.19
22. Do above and beyond the basic requirements for a job.	611	6.00	5.55	1.16
26. Hold to the commitments that you make.	611	6.00	6.10	1.15
29. Live up to your personal standards.	611	6.00	6.16	1.13
37. Write a letter in support of a political belief or issue.	610	6.00	4.01	1.33
41. Do just enough of a task to get the job done.	611	6.00	4.89	1.38
45. Bending the rules when a situation demands it	609	6.00	4.04	1.52
51. Return something to a store that you have used, but has nothing wrong with it	610	6.00	5.02	1.48
55. Gain unfair advantage from someone else's mistake.	611	6.00	5.08	1.43
57. Tell a while lie to prevent problems.	610	6.00	4.42	1.57
62. Allow others to worry about social and political concerns.	611	6.00	4.42	1.49
65. Bending rules to fit each situation as needed.	611	6.00	4.58	1.52
70. Agree to do something you know you aren't going to do.	608	6.00	5.94	1.31
74. Manipulate people to get things done when you need to.	610	6.00	5.36	1.52

Table 6: Prudence subscale means and standard deviations

Prudence				
	N	Range	Mean	SD
2. Make decisions only after gathering information from different sources	611	6.00	5.39	1.28
4. "Sleeping" on it before making a major decision.	611	6.00	4.98	1.40
10. Create a budget to manage your money.	611	6.00	5.39	1.36
18. Always seek more than one medical opinion for an important health diagnosis.	611	6.00	4.80	1.51
21. Never let yourself get intoxicated from alcohol.	611	6.00	3.91	1.95
27. Working more for long term satisfaction than for immediate gratification.	611	6.00	5.61	1.14
31. Acknowledge when you don't understand something.	610	6.00	5.56	1.19
49. Review your notes for classes every day.	611	6.00	4.31	1.52
13. Cram for exams instead of studying consistently through the semester.	608	6.00	4.48	1.65
40. Making a decision without complete information.	611	6.00	5.09	1.35
44. Act quickly and decisively without too much concern for long term consequences.	611	6.00	5.42	1.34
47. Only balance your checkbook if there might be a problem.	611	6.00	5.07	1.62
53. Have complete trust in the wisdom of your medical doctor.	611	6.00	3.48	1.48
56. Being able to handle drinking more than 2 alcoholic drinks an hour.	611	6.00	4.25	1.81
61. Making sure you get what you want as soon as possible.	611	6.00	4.98	1.50
68. Always act as if you know something during a conversation, even if you do not.	611	6.00	5.00	1.48

Table 7: Respect subscale means and standard deviations

Respect				
	N	Range	Mean	SD
3. Refrain from arguing with your parents or elders.	610	6.00	5.03	1.46
5. Try hard to be punctual.	611	6.00	5.69	1.41
12. Hold the door open for someone else coming in or out through the same door.	610	6.00	5.86	1.11
16. Allow someone with different beliefs to express themselves.	611	6.00	5.92	1.21
24. Permit someone right of way when driving.	611	6.00	5.26	1.19
28. Observe basic courtesies (like saying please and thank you) where appropriate.	611	6.00	6.24	1.08
32. Refrain from talking during a lecture.	610	6.00	5.23	1.33
34. Never litter.	611	6.00	5.08	1.50
39. Always assert your own opinion.	610	6.00	2.82	1.27
43. Not be overly concerned with being right on time to appointments.	611	6.00	5.57	1.44
48. Push your way through a crowd when you are in a hurry.	611	6.00	4.68	1.49
52. In a discussion, making sure everyone agrees with your opinion.	611	6.00	4.96	1.36
59. Tailgate someone who's driving too slow in front of you.	611	6.00	5.14	1.50
63. Not wasting your time and energy on formalities.	611	6.00	4.62	1.34
67. If you have something to say, interrupting during a presentation.	611	5.00	5.82	1.21
71. Allow others to clean up after you.	611	6.00	5.49	1.38

The VEIS subscale scores, and a delineation of scale scores for males and females are presented in Tables 8, 9 and 10 below. These tables also present data pertinent to the shape of the VEIS score distribution.

Table 8: VEIS Subscale mean scores

	N		Mean	SD	Skewness (SD)	Kurtosis (SD)	Percentiles		
	Valid						25	50	75
Benevolence	602		5.42	.78	-0.04 (.10)	-0.15 (.20)	4.90	5.47	5.98
Integrity	600		5.13	.74	-0.16 (.10)	-0.39 (.20)	4.61	5.17	5.67
Prudence	608		4.85	.68	-0.04 (.10)	-0.43 (.20)	4.31	4.88	5.31
Respect	608		5.21	.67	-0.31 (.10)	-0.30 (.20)	4.75	5.25	5.69

Table 9: VEIS Subscale mean scores (males)

	N		Mean	SD	Skewness (SD)	Kurtosis	Percentiles		
	Valid						25	50	75
Benevolence	247		5.16	.79	-0.02 (.16)	-0.36 (.31)	4.63	5.16	5.68
Integrity	244		4.89	.68	0.17 (.16)	-0.32 (.31)	4.39	4.83	5.39
Prudence	247		4.60	.65	0.18 (.16)	-0.23 (.31)	4.13	4.56	5.06
Respect	249		4.97	.66	0.05 (.15)	-0.49 (.31)	4.50	5.00	5.44

Table 10: VEIS Subscale mean scores (females)

	N		Mean	SD	Skewness	Kurtosis	Percentiles		
	Valid						25	50	75
Benevolence	318		5.62	.71	-0.74 (.14)	0.89 (.27)	5.24	5.67	6.12
Integrity	319		5.33	.70	-0.49 (.14)	0.30 (.27)	4.83	5.39	5.83
Prudence	324		5.04	.63	-0.23 (.14)	-0.22 (.27)	4.63	5.06	5.50
Respect	322		5.40	.61	-0.64 (.14)	0.68 (.27)	5.00	5.47	5.81

The skewness statistics represent the symmetry of a distribution. The obtained values, particularly as they were obtained from a relatively small sample size, are “good” and indicate distributions that are very nearly symmetrical. Kurtosis represents the degree of peakedness of an obtained distribution. The obtained values in this sample indicate acceptable kurtosis. In summary, skewness and kurtosis are used to help determine the comparative normality of a distribution. The data obtained in this study does not perfectly

represent a normal distribution, however the degree to which it deviates is small, and it is acceptable to proceed in the analyses assuming normality and without requiring transformation of the data.

#### Sex and age differences on the VEIS

The significance of the observed sex differences were first examined using *t*-test statistics comparing scores on the overall VEIS mean. Analyses were run in different patterns in order to understand the result patterns as fully as possible. First, a significant difference where women's scores ( $M = 5.35$ ,  $SD = .61$ ) were higher than men's ( $M = 4.90$ ,  $SD = .64$ ) was found  $F(545) = -.84$ ,  $p < .01$ . This, however is not particularly meaningful, so follow-up analyses were conducted to examine subscale patterns of differences, and the results are as follows (all differences are significant, with women's scores higher than men's). Because of the significant differences that were found, separate normative scale data is presented in Tables 9 and 10 above. Women's scores ( $M = 5.62$ ,  $SD = .71$ ) were found to be higher than men's ( $M = 5.16$ ,  $SD = .79$ ) on the benevolence subscale,  $t(563) = -7.2$ ,  $p < .01$ ; women's scores ( $M = 5.33$ ,  $SD = .70$ ) were higher than men's ( $M = 4.89$ ,  $SD = .68$ ) on integrity  $t(561) = -7.5$ ,  $p < .01$ ; women's scores ( $M = 5.04$ ,  $SD = .63$ ) were higher than men's ( $M = 4.60$ ,  $SD = .65$ ) on prudence  $t(569) = -8.2$ ,  $p < .01$ ; and women's scores ( $M = 5.40$ ,  $SD = .61$ ) were also higher than men's ( $M = 5.0$ ,  $SD = .66$ ) on the respect subscale  $t(569) = -8.2$ ,  $p < .01$ . Calculation of the mean of the mean difference in scores based on sex shows an average subscale difference of .44 between men's and women's scores.

Stages of moral reasoning are positively correlated with age. To investigate if patterns of responding were similar for the VEIS instrument, participants were blocked into three groups, 18-19 years, 20-21 years and 22-23 years of age, then an ANOVA was conducted between these groups and the mean responses on each of the four VEIS subscales. No significant differences were found on the basis of age group. This result is not surprising, as the ages of 18-23 represent a relatively homogeneous subset of the population in regards to stages of moral development. As such, it may be the case that differentiating between VEIS scores on such a restricted subset of the population is not possible.

#### Reliability analyses: Internal Consistency Reliability

The internal consistency reliability analyses conducted utilized Chronbach's alpha statistic, an index of item homogeneity. Table 11 below presents the standardized item alphas, means and standard deviations for each of the four ethics subscales. Results were examined to determine which items may fail to contribute to the scale's reliability, and the results are indicated below. The means for each subscale are unaveraged, and include the number of items as noted in the left column.

Table 11: Internal consistency reliability of VEIS subscales

	N (item)	N (Ss)	Mean	SD	alpha
Benevolence	16	602	86.23	12.56	.89
Integrity	18	600	92.40	13.30	.85
Prudence	16	607	77.69	10.85	.75
Respect	16	607	83.40	10.69	.80

Removal of item 53 would raise the Prudence subscale score to an alpha of .77. In three subscales (benevolence, integrity, prudence and respect), the addition of reverse



worded items as implemented in this study provide only marginal improvements to subscale internal reliabilities. Removal of the reverse scored item 39 would return the internal reliability to .83. Analyses of the internal consistency reliability of the subscales was also run by dividing out reversed worded items and positively worded items separately according to subscale (yielding a total of 8 scales). Inspection of the results conducted in this manner indicated that the addition of the reverse worded items did not contribute positively to the subscale reliabilities. Internal consistency reliabilities for other scales utilized in these studies are presented in Appendix E.

#### Reliability Analyses: Test-retest reliability

The stability of individual's responses over time was investigated by administering the VEIS instrument on two occasions and correlating the responses using the Pearson correlation. The number of participants was lower than is typically desirable, as it was not possible to arrange for retesting at an exact interval from the first date of testing. As a result, retest data is divided into three groups; those who were tested one week after the initial session, a group of those tested at two weeks, and a final group at three weeks. Analyses are presented in two forms. The first is a test of overall differences on the questionnaire by week, presented in Table 12. The second presents the subscale differences, at each week, and is shown in Table 13.

Table 12: Overall VEIS score test-retest correlation, by week of re-evaluation

Week	N	Correlation
1	34	.74
2	16	.62
3	12	.92

All correlations significant at the .01 level

Table 13: Test-retest correlations, by VEIS subscale

	Week 1	Week 2	Week 3
Benevolence	.81	.63	.89
Integrity	.79	.64	.78
Prudence	.62	.65	.78
Respect	.74	.57	.65

All correlations significant at the .01 level

#### Validity: Social Desirability

A significant concern in evaluating the validity of this measure concerns the degree to which social desirability impacts an individual's pattern of responses on the VEIS measure. To investigate this relationship further, correlation coefficients comparing scale means on each social desirability subscale with each of the virtue ethics subscales were calculated. The results are presented in Table 14 below. Each of the social

Table 14: Correlations of VEIS subscales with the BIDR-6 subscales

	n	SDE	Sig	n	IM	Sig
Benevolence	183	.22	.003	181	.37	.000
Integrity	182	.19	.01	180	.45	.000
Prudence	186	.22	.002	184	.32	.000
Respect	185	.25	.001	183	.37	.000

All correlations significant at the .01 level

desirability subscales is significantly correlated with each of the virtue ethics subscales, which was consistent with expectations. Similarly, the lower degree of correlation between the VEIS subscales and the SDE subscale as compared to the IM subscale was consistent with theoretical expectations.

#### Validity: Convergent Validity

Convergent validity was explored by calculating correlation coefficients between the VEIS scales and those VIA scales anticipated to have some degree of conceptual

similarity. Bolded correlation coefficients are those items which should represent the highest correlations based on theoretical expectations due to construct similarity.

Table 15: Correlations between VEIS scales with convergent VIA subscales

	n	Citizenship/ Teamwork	n	Integrity/ Honesty	n	Prudence	n	Kindness/ Generosity
Benevolence	183	<b>.44</b>	184	.36	182	.21	183	<b>.49</b>
Integrity	182	.44	183	<b>.32</b>	181	.28	182	.36
Prudence	186	.39	187	.32	185	<b>.33</b>	186	.29
Respect	185	<b>.46</b>	186	.38	184	.29	185	.43

All correlations significant at the .01 level

Inspection of the patterns of results in Table 15 above indicates that in two of the cases, Benevolence and Respect, the correlations are highest in the predicted cells (predicted cells are bolded for each of the four VEIS subscales). While the Integrity and Prudence subscales do not show quite as strong results, positive, significant correlations are observed.

Table 16: Correlations between VEIS subscales and divergent VIA subscales

	n	PI	n	MH	n	AB	n	SR
Benevolence	184	.18*	182	.21**	184	.17*	184	.13
Integrity	183	.14	181	.24**	183	.06	183	.19*
Prudence	187	.19	185	.19**	187	.14	187	.23**
Respect	186	.20**	184	.25**	186	.22**	186	.18*

\* correlation is significant at the .05 level

\*\* correlation is significant at the .01 level

The range of the correlation coefficients of the convergent items, shown in Table 15, matched with the anticipated highest correlating subscales is between .49 and .32, whereas the coefficients are notably lower across those items expected to have less shared similarity. These divergent items show a range of .06 to .25, as shown above in Table 16. While many of the divergent items are significantly correlated, it is notable that

in comparison all of the convergent scales show significant correlations. Additionally, the average correlation coefficients are consistently lower for this group of divergent items than with the projected convergent scales. Another manner in which differences can be depicted is through a comparison of the average correlation for each of the VEIS subscales, based on convergent or divergent expectations. As inspection of the chart below indicates (Table 17), those items anticipated to have higher correlations due to construct overlap do in fact have higher correlation coefficients than the averaged divergent items.

Table 17: VEIS and VIA subscale averaged correlations

	Convergent	Divergent
Benevolence	.38	.17
Integrity	.35	.16
Prudence	.33	.16
Respect	.39	.21

When examining the extent to which the subscales of the VEIS converge or diverge with other measures, it is also pertinent to examine the degree to which the subscales are intercorrelated within the measure. Table 18 presents these subscale intercorrelations. It is promising to note that the scales are moderately to strongly correlated with one another, suggesting that conceptually similar constructs are being assessed. Further, the degree of these correlations within the measure are clearly higher correlations than with any of the other measures being concurrently evaluated, which is consistent with what one would expect given the theoretical relationships between the constructs evaluated.

Table 18: VEIS subscale intercorrelations

	Benevolence	Integrity	Prudence	Respect
Benevolence				
Integrity	.82			
Prudence	.73	.77		
Respect	.83	.79	.74	

All correlations significant at .01 level

#### Validity: Relationship to a measure of moral reasoning

In order to assess the relationship between VEIS scale scores and stage of moral reasoning, correlations were calculated between the assessed stage of moral reasoning as measured by the DIT and the subscale scores of the VEIS. Before proceeding, a note of caution is warranted. The DIT-2 is currently under re-evaluation by the publisher, and this created a number of difficulties in evaluating the data. This information was not made clear to the researchers by the publisher when the measure was obtained. The publisher has expressed concerns in recent publications that the DIT-2 may, in fact, not clearly categorize participants into the groups originally hypothesized by Kohlberg (Rest, Thoma & Bebeau, 1999). The publisher failed to provide information regarding how to effectively interpret the new indices that are under re-development, so the decision was made to progress with the analyses based on the originally proposed analyses. This involves using the stages of moral development as originally conceived (stages 2-6) as the categories which result in examination of the DIT-2 data.

A measure for ethical beliefs is expected to have a predictable relationship with an established measure of moral reasoning such that higher levels of assessed moral reasoning should be associated with higher levels within each of the subscales on the VEIS. Our expectation is that a positive relationship will exist between scores on each

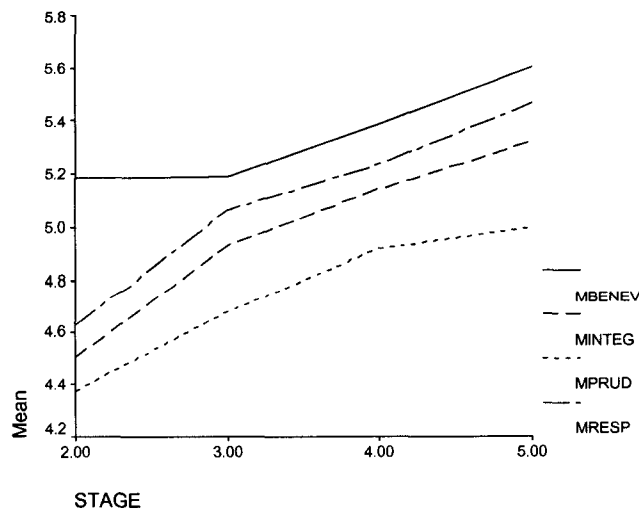
VEIS subscale and increasing levels of moral decision making, and we would expect some degree of shared variance to exist between the two measures. Four separate 1-Way ANOVAS, comparing means on each of the four subscales across each stage of moral reasoning was conducted, with the following results:

Table 19: ANOVA results comparing moral reasoning stages to VEIS subscales

	df	mean square	F	Sig	R
Benevolence	3	1.046	1.619	.18	.16
Integrity	3	.934	1.597	.19	.16
Prudence	3	.777	1.776	.15	.14
Respect	3	1.030	2.671	.04	.20

The trend of the relationship is clearly in the anticipated direction, such that higher stage scores on the DIT are associated with higher VEIS subscale scores. This relationship is graphically depicted in Figure 1 below. While this is promising, the proportion of the variability in the data accounted for by an individual's level of moral reasoning is low, as expressed by the *R* values indicated above. This could occur for a number of reasons, perhaps the most important being that the subscales on the VEIS are

Figure 1: Trends in the relationship between DIT score and VEIS subscales



*not* purported to be measures of moral reasoning, but rather represent the relative importance to the individual of behaviors grouped into four ethical categories. It is promising to see that higher scores on the DIT do correspond to higher scores on each of the VEIS subscales, although with the exception of the Respect subscale, this relationship does not reach statistical significance.

#### Evaluation of participant response items

There were three general techniques implemented in this version of the VEIS to evaluate whether participants were carefully discriminating between items on the questionnaire. Among these techniques were the inclusion of infrequency items, positive endorsement items, and a comparison of two matched pairs sets. First, frequency counts of responses to each scale point are presented for both the infrequency items (Table 20) and the positive endorsement items (Table 21), below which are the actual items. These presentations are followed by a brief interpretation of the results. This display is followed by presentation of the correlation results with matched pairs items, and a discussion of those results.

Table 20: Endorsement of each infrequency item by response scale point

	1	2	3	4	5	6	7
Inf1	354	61	31	122	20	14	8
Inf2	266	93	44	151	33	8	16
Inf3	49	105	107	173	129	35	12
Inf4	151	80	58	244	58	15	4

---

Inf1 Walk in three circles around your car to prevent getting a parking ticket.  
 Inf2 Be very careful to never step on small cracks in the sidewalk.  
 Inf3 Volunteer at least 30% of your time and/or money to charities.  
 Inf4 Calm yourself before exams by shuffling playing cards.

---

Table 21: Frequency of each positive endorsement item by response scale point

	1	2	3	4	5	6	7
Pos1	2	9	16	44	99	219	220
Pos2	7	5	9	40	71	183	295
Pos3	6	18	19	21	35	77	432

---

Pos1 Be genuine in your interactions with others.

Pos2 Make sure you spend at least a little time each week talking to friends.

Pos3. Brush your teeth at least once a day.

---

Infrequency items 1 and 2 indicate that a relatively high proportion of individuals respond as anticipated by endorsing items on the low end of the importance scale, whereas items 3 and 4 appear to be less effective in eliciting this response. This is promising, as it indicated discrimination in responding. Similarly, the third positive endorsement item appears to elicit the strongest response consistent with our expectations.

Inspection of the results for the infrequency and positive endorsement items does indicate a problem with the construction of the measure. While the scale constructors expected strong endorsement of response point 1, a substantial proportion of participants endorsed the item as 4 (I don't think my behavior in this type of situation matters to me at all). Modifications to correct this problem are proposed in the discussion section. While this participant response check was effective in detecting one weakness in the scale construction, it is promising that the majority of respondents answered in a manner consistent with expectations.

#### Two sets of matched pairs items

Correlations of responses to matched item pairs were carried out to investigate how consistently participants were responding to highly similar items within the measure.



Correlations of both sets of matched paired items were statistically significant.

Table 22: Matched pairs items

8. Strictly uphold all aspects of academic integrity.	45. Bending the rules when a situation demands it.
38. Strictly uphold all aspects of academic integrity.	65. Bending rules to fit each situation as needed.

Items 8/38, which were identical items,  $r = .62$ , and items 45/46 correlated at .36. Both of these values, particularly for items 8/38 were lower than anticipated.

#### Item analysis

An item analysis to investigate the strength of the correlation between each of the items within each subscale with the subscale mean score was conducted. The results from this analysis are presented below, with the highest five correlations marked in bold type.

Table 23: Correlations of items in each subscale with subscale total scores

Item #	Benevolence	Integrity	Prudence	Respect
1	.46	<b>.58</b>	<b>.58</b>	.44
2	.64	.56	.38	.56
3	.61	.44	<b>.51</b>	.50
4	.54	<b>.73</b>	.44	.53
5	<b>.72</b>	<b>.63</b>	.36	.50
6	<b>.67</b>	.52	.53	<b>.60</b>
7	.62	.56	.44	<b>.57</b>
8	<b>.69</b>	.50	<b>.54</b>	<b>.62</b>
9	.44	.47	.47	-.28
10	.62	.47	<b>.57</b>	.44
11	.58	.51	<b>.55</b>	<b>.57</b>
12	.54	.57	.46	.47
13	<b>.69</b>	<b>.66</b>	.01	.53
14	.54	.51	.47	.41
15	.65	.31	.40	<b>.57</b>
16	<b>.69</b>	.57	.44	.56
17	*	.58	*	*
18	*	<b>.66</b>	*	*

The original proposal included plans to conduct a confirmatory factor analysis on the VEIS data obtained in this study, however a number of considerations indicate that this is

not the most appropriate manner in which to proceed. These considerations are addressed more fully in the discussion section of the dissertation.

An alternative approach, the creation of a briefer form of the VEIS was pursued. A new, briefer questionnaire, based on what appear to be the most appropriate items based on the analyses conducted to this point was generated. This was done with the intention of evaluating this new measure in terms of reliability, validity, and other important psychometric dimensions. Then an exploratory factor analysis on this reduced measure was conducted and is presented later in this document. To demonstrate the appropriateness of this approach to a questionnaire based on the total set of 74 items as used from the beginning of this study, results of a factor analysis conducted on the 74 item measure will be presented and compared with a briefer measure.

Items for a new, brief version of the VEIS were selected on the basis of the strength of the correlations presented in Table 23 above and the degree to which the items theoretically assess crucial aspects of the construct we are trying to measure. Items were also selected on the basis of their contribution to the internal consistency reliability. The collection of selected items are presented in Appendix F. In addition, retaining one positive endorsement item and one infrequency item to serve as participant attention checks is logical, and the strongest responding items from each group were selected for inclusion, and are also included in Appendix F. All subsequently presented information regarding the short form of the VEIS (VEIS-R) was conducted on the measure resulting from these selection techniques.

Similar to the findings in the first analyses, the skewness and kurtosis calculated on the four subscales for the new briefer measure, including males and females together, indicates a distribution shaped close enough to the normal distribution that no necessary adjustment to the data is necessary. Consult Tables 24-26 for further detail.

Table 24: Scale item scores for VEIS-R

	N		M	SD	Skewness (SD)	Kurtosis (SD)	Percentiles		
	Valid						25	50	75
Benevolence	607		5.61	.83	-0.73 (.01)	0.68 (.20)	5.17	5.67	6.17
Integrity	605		5.70	.90	-0.70 (.01)	-0.09 (.20)	5.14	5.86	6.43
Prudence	611		5.38	.84	-0.36 (.01)	-0.29 (.20)	4.80	5.40	6.00
Respect	610		5.46	.83	-0.43 (.01)	-0.15 (.20)	5.00	5.57	6.00

Table 25: Scale item scores on the VEIS-R for males

	N		M	SD	Skewness (SD)	Kurtosis (SD)	Percentiles		
	Valid						25	50	75
Benevolence	248		5.38	.86	-0.31 (.16)	-0.33 (.31)	4.83	5.50	6.00
Integrity	248		5.39	.88	-0.27 (.16)	-0.61 (.31)	4.86	5.43	6.00
Prudence	249		5.17	.85	-0.06 (.16)	0.51 (.31)	4.60	5.20	5.80
Respect	248		5.16	.81	-0.25 (.16)	-0.43 (.31)	4.57	5.29	5.71

Table 26: Scale item scores on the VEIS-R for females

	N		M	SD	Skewness (SD)	Kurtosis (SD)	Percentiles		
	Valid						25	50	75
Benevolence	322		5.78	.75	-1.19 (.14)	2.99 (.27)	5.33	5.83	6.33
Integrity	320		5.96	.82	-1.26 (.14)	1.78 (.27)	5.57	6.14	6.57
Prudence	325		5.54	.79	-0.61 (.14)	0.40 (.27)	5.20	5.60	6.10
Respect	325		5.70	.76	-0.64 (.14)	0.60 (.27)	5.14	5.71	6.29

#### Sex differences on the VEIS-R

The pattern of sex differences observed in this revised 27 item measure, is similar to that observed in the previously presented measure in that women's responses are all

significantly higher than men's responses on each of the four subscales. Specific data for each subscales are as follows: on Benevolence scale, ( $M = 5.78$  for women vs  $M = 5.38$  for men)  $F(1, 492) = -5.78, p < .001$ ; on Integrity, ( $M = 5.96$  for women vs  $M = 5.39$  for men)  $F(1, 511) = -7.85, p < .001$ ; on Prudence ( $M = 5.54$  for women vs  $M = 5.17$  for men)  $F(1, 514) = -5.41, p < .001$ ; and on Respect ( $M = 5.70$  for women vs  $M = 5.16$  for men)  $F(1, 516) = -8.04, p < .001$ . It is interesting to note that the mean of the differences between the men's scores and women's scores is nearly identical on this version of the VEIS to the previous version ( $M = .47$ ).

#### Reliability

Analyses conducted to evaluate the reliability of the VEIS-R measure are nearly identical to those previously conducted on the 74 item VEIS measure. First, internal consistency reliability ratings were calculated using Chronbach's alpha, then the stability of the measure over time was evaluated by calculating a Pearson correlation coefficient between the scores on the initial VEIS and re-administration results.

Table 27: internal consistency reliability of VEIS-R subscales

	N (item)	n	Mean	SD	alpha
Benevolence	6	607	35.32	5.31	.86
Integrity	7	605	39.90	6.27	.82
Prudence	5	611	29.60	4.22	.66
Respect	7	10	38.23	5.81	.73

Internal consistencies for each of the subscales would not be improved if any of the items comprising those subscales were removed. The internal consistency reliabilities are slightly lower than in the larger measure (for a direct comparison, consult Appendix G), however the differences are small. The one scale which may need further attention is the Prudence subscale, which has the lowest reliability.

Table 28: Overall VEIS-R score test-retest reliability, by week of re-evaluation

Week	n	Correlation
1	33	.76
2	15	.56
3	11	.83

Table 29: Test-retest correlations, by subscale and week of re-evaluation

	Week 1	Week 2	Week 3
Benevolence	.70	.58	.85
Integrity	.82	.57	.65
Prudence	.58	.62	.81
Respect	.58	.46	.63

The trend of the test-retest correlations is difficult to interpret, which is believed to be attributable to the relatively small sample size at each interval. However, although the pattern is somewhat unusual in terms of the trend of the data, the measure does appear to be acceptably stable over time. The correlations appear to be generally similar to those obtained using the 74 item measure.

#### Relationship of the VEIS-R to a measure of social desirability

Table 30: Correlations of VEIS-R subscales with the BIDR-6

	n	SDE	Sig	n	IM	Sig
Benevolence	186	.18	.016	184	.27	.000
Integrity	184	.18	.016	182	.44	.000
Prudence	188	.26	.000	186	.28	.000
Respect	187	.23	.001	185	.36	.000

All correlations significant at the .05 level

The obtained correlations between the measure of social desirability (the BIDR-6) and the measure under development indicate highly similar results to those that were obtained on the 74 item measure. In addition, one correlation coefficient, the benevolence subscale, decreased by .10, indicating an even lower confound with socially desirable

responding. In fact, while the differences are slight, only one of the correlations is not lower (the exception is on the correlation between prudence and SDE).

#### Convergent validity

Table 31: Correlations between VEIS scales with convergent VIA subscales

	n	Citizenship/ Teamwork	n	Integrity/ Honesty	n	Prudence	n	Kindness/ Generosity
Benevolence	186	.33	187	.35	185	.18	186	<b>.43</b>
Integrity	184	.39	185	<b>.30</b>	183	.183	184	.34
Prudence	188	.39	189	.33	187	<b>.34</b>	188	.29
Respect	187	<b>.39</b>	188	.32	186	.24	187	.33

All correlations significant at the .05 level

Results on the convergent correlation comparisons using the short version of the VEIS are also similar to the pattern of results obtained on the larger questionnaire (see Appendix G for both convergent correlation matrices). Correlation coefficients are slightly lower (except for prudence which is .01 higher on the short form) for all equivalent cells.

Table 32: Correlations between VEIS scales with divergent VIA subscales

	n	PI	n	MH	n	Appreciation of Beauty	n	Self- Regulation
Benevolence	187	.19*	185	.18*	187	.21*	<b>187</b>	<b>.09</b>
Integrity	185	.12	183	<b>.22*</b>	185	.01	185	.11
Prudence	189	.12	187	.19*	189	<b>.18*</b>	189	.21*
Respect	188	<b>.15*</b>	186	.20*	188	.15*	188	.17*

\* = correlation significant at the .05 level

Comparison of the analyses on the divergent VIA scales shows better results than the results obtained on the larger measure (See Appendix G for a side-by-side comparison). In the previous analysis the range of correlations was between .06-.25. In the new analysis the correlations tend to be lower, and cover a narrower range of

coefficients between .01-.22. As with the previous analysis, there is a notable difference in the correlation coefficients for the divergent and convergent comparisons, consistent with our expectations. Those scales expected to be convergent show higher correlations with the VEIS-R than those scales anticipated to be divergent.

Also replicated are the correlation coefficients which assist in examining the degree to which the subscales are intercorrelated within the measure. Table 33 presents these subscale intercorrelations for the VEIS-R. Again the scales are moderately

Table 33: VEIS-R subscale intercorrelations

	Benevolence	Integrity	Prudence	Respect
Benevolence				
Integrity	.70			
Prudence	.62	.58		
Respect	.68	.64	.60	

All correlations significant at .01 level

to strongly correlated with one another, although slightly less so than in the larger 74 item measure. This may actually be more advantageous, as it indicates that conceptually similar constructs are being assessed, however there is greater divergence between each of the four subscales. As was the previous case, the degree of these correlations within the measure are clearly higher correlations than with any of the other measures being concurrently evaluated, which is consistent with what one would expect given the theoretical relationships between the constructs evaluated.

Another way to demonstrate the manner in which the results support the validity of the VEIS-R is through a comparison of the average correlation for each of the VEIS subscales, based on convergent or divergent expectations. As inspection of the chart below indicates (Table 34), just as in the previous analysis, those items anticipated to

have higher correlations due to construct overlap do in fact have higher correlation coefficients than the averaged divergent items.

Table 34: VEIS-R and VIA subscale averaged correlations

	Convergent	Divergent
Benevolence	.32	.17
Integrity	.30	.12
Prudence	.34	.18
Respect	.32	.17

Also replicated was examination of whether a positive relationship exists between scores on each VEIS subscale and more advanced levels of moral decision making. Three separate 1-Way ANOVAS, comparing means on each of the four subscales across each stage of moral reasoning was conducted, with the following results:

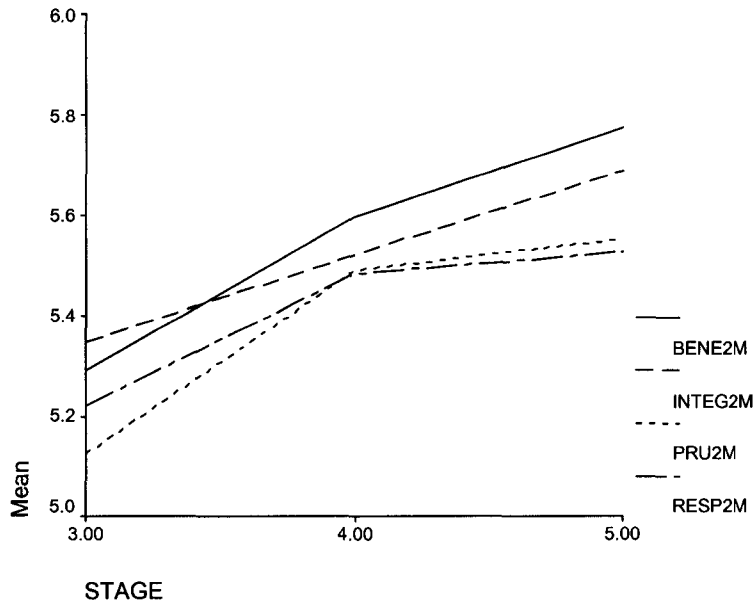
Table 35: Relationship VEIS-R to a measure of moral reasoning

	Df	mean square	F	Sig	R
Benevolence	2	2.29	3.44	.03	.19
Integrity	2	1.05	1.05	.35	.11
Prudence	2	2.19	3.01	.05	.15
Respect	2	1.14	1.50	.23	.11

Again, the trend of the relationship is clearly in the anticipated direction, with higher stage scores on the DIT associated with higher VEIS subscale scores. This relationship is graphically depicted in Figure 2 below (note that stage 2 is not shown, as only 1 individual fell into this category). While this is promising, the proportion of the variability in the data accounted for by an individual's level of moral reasoning is again low.



Figure 2: relationship of moral reasoning stages to VEIS-R subscales



### Item analysis

Table 36 displays the correlation between each item of each of the scales, and the correlation that the item has with the subscale mean. For example, Item 1 is the first question on the benevolence scale and it has a correlation coefficient of .59. The next cell to the right, with a value of .69, is the first question on the integrity scale, etc.

Table 36: VEIS Subscale correlations

	Benevolence	Integrity	Prudence	Respect
1	.59	.69	.72	.45
2	.78	.80	.62	.54
3	.74	.73	.62	.69
4	.75	.59	.69	.76
5	.66	.70	.68	.68
6	.53	.47	*	.57
7	*	.74	*	.41

All correlations significant at the .01 level

### Factor Analysis

To explore the factor structure of the revised 27 item VEIS, the VEIS-R, an exploratory factor analysis was conducted using maximum likelihood factor extraction followed by oblique rotation<sup>2</sup>. Using this approach, a four factor solution that converged in 35 iterations was found. Table 37 below provides the variance explained. Information is presented for the only the first 10 factors for brevity. Table 38 shows the structure matrix for each of the four factors identified in the analyses. Values over .03 are bolded. The obtained results do not support a four factor solution that is consistent with the hypothesized virtue ethics constructs that show benevolence, integrity, prudence and respect as unique factors. The obtained results appear to show a large, general virtue ethics first factor. The second factor in the solution appears to be a reverse coding factor. Evaluation of the individual items loading on the third and fourth factors is difficult,

Table 37: Factor analysis variance results

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	9.85	39.39	39.39	9.34	37.38	37.38	8.64
2	2.28	9.10	48.49	1.76	7.05	44.42	6.76
3	1.16	4.64	53.13	.60	2.41	46.83	1.28
4	1.03	4.12	57.25	.52	2.06	48.90	.81
5	.85	3.38	60.63				
6	.77	3.07	63.70				
7	.74	2.97	66.67				
8	.72	2.88	69.55				
9	.65	2.59	72.15				
10	.62	2.47	74.62				

Extraction Method: Maximum Likelihood.

<sup>2</sup> Factor analysis information for the 74 item VEIS is presented in Appendix H.

and the items on these respective factors do not represent factors consistent with expectations. The scree plot of the Eigen values is presented in Appendix I.

Table 38: Item- Factor loadings on the VEIS-R

	Factor			
	1	2	3	4
Benevolence (1)	<b>.65</b>	.11	-.09	.09
Integrity (1)	<b>.60</b>	.02	.04	.24
Prudence (1)	<b>.41</b>	.15	-.08	<b>.35</b>
Respect (1)	<b>.50</b>	.13	-.19	<b>.32</b>
Prudence (2)	<b>.51</b>	.00	.03	.15
Integrity (2)	<b>.69</b>	.01	.22	.01
Integrity (3)	<b>.75</b>	.04	.02	-.07
Benevolence (2)	<b>.84</b>	-.01	.05	-.10
Integrity (4)	<b>.72</b>	.11	-.16	.01
Prudence (3)	<b>.61</b>	.06	-.06	.02
Respect (2)	<b>.73</b>	.15	-.24	-.17
Respect (3)	<b>.55</b>	-.03	.11	.07
Benevolence (3)	<b>.83</b>	.00	.02	-.20
Respect (4)	<b>.50</b>	-.06	.25	.14
Benevolence (4)	<b>.74</b>	.09	-.07	-.20
R-Benevolence (5)	.13	<b>.67</b>	-.03	-.10
R-Benevolence (6)	.08	<b>.69</b>	.02	-.07
R-Integrity (5)	.10	<b>.34</b>	.45	-.05
R-Integrity (6)	.00	<b>.79</b>	-.10	.00
R-Integrity (7)	.10	<b>.40</b>	<b>.41</b>	-.13
R-Prudence (4)	-.03	<b>.51</b>	.08	.16
R-Prudence (5)	-.04	<b>.60</b>	.03	.11
R-Respect (5)	-.01	<b>.32</b>	<b>.34</b>	.04
R-Respect (6)	.11	<b>.61</b>	-.10	-.05
R-Respect (7)	.06	<b>.53</b>	.14	-.08

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

## DISCUSSION

This project involved a number of endeavors designed to help clarify the psychometric properties of a new instrument to be used for further investigations in ethics research. In order to improve upon and expand the body of research developed for the Master's thesis, many procedures and analyses were designed, conducted and evaluated. The material presented in this dissertation demonstrates consistent efforts and progress toward developing an instrument that allows the researcher to begin to measure a set of highly abstract constructs.

These abstract constructs, virtue ethics, have been effectively operationalized and many of the results suggest that the virtue ethics are being assessed through this measure. In itself, this is a remarkable achievement. As this discussion will address, while there are certain aspects upon which the measure appears to fall short of original expectations, the success of this project has actually been substantial, primarily because of the difficulty of measuring such abstract concepts.

While it was the initial goal to have this series of investigations represent the final stages of evaluation on the VEIS, the observations and resulting modifications necessary to significantly improve the instrument changed the most appropriate sequence of analyses. Currently, the VEIS is a much sounder instrument than what has existed in previous iterations. The VEIS-R, in its 27 item format, is the result of a logical choice of items selected both on theoretical expectations and psychometric evidence. It was possible to select those items which were most highly correlated with the subscales in terms of both forward and reversed responding.

During the data analysis portion of the work on this dissertation, a number of factors contributed to the significant reduction of the number of items administered in the VEIS. There are a number of reasons for which it is desirable to create the shortest, most desirable measure possible. Perhaps the most compelling reason is that as this is an instrument being designed for future research endeavors. It likely will be administered in conjunction with other measures. Thus, it is critical that the shortest measure possible be developed. Some questions clearly did not contribute significantly to the psychometric strength of the instrument and were therefore removed. In this discussion, most of the evaluation will focus on the short, 27 item version of the VEIS, however when comparisons with other versions, the 74 item version and the Master's version, the will be clearly noted.

A number of indicators seem to suggest that the combination of a large number of items (74) with a large number of reverse coded items does not contribute to the ability to evaluate these constructs, and may in fact influence participant responses in a manner not consistent with the objectives of this research. It is possible that the presence of so many reverse coded items in some way sensitized participants, causing them to focus on consistent responding between items and among divergent ethical constructs. If this is the case, then it would work against the purpose of the measure because it influences participants to discriminate less between items on the measure in favor of focusing on attempts toward consistent responding. In addition, the large number of reversed items appears to have induced a possible artificial factor upon which only reverse coded items primarily load. It is also possible that participants adopted a strategy designed to appear

to be consistent in order to complete the task in a time limited manner. Additionally, it is possible that participants may not be highly motivated to discriminate carefully between responses or to record responses that accurately reflect their internally held viewpoints.

While this is a common approach to attempt in test construction, this approach does not seem to work well for this particular format or constructs. In order to fully justify this approach of doubling the measure for the purpose of equally counterbalancing the items, it would be necessary to see evidence that this approach contributes substantially to the strength of the measure, and this evidence is not present. Doubling the size of the measure from its previous version introduces a number of sources of error, such as fatigue and increasing the probability of mis-recording responses.

A relatively small sample size in the study designed to evaluate the test retest reliability of the measure contributed to the unusual results obtained. While a consistent, gradual downward trend would be expected across time, the obtained results showed a non-linear trend, which is believed to be attributable to the small sample of participants at each week of evaluation. Despite this, the measure shows reasonable stability over time.

One of the purposes of this research was to address questions of how social desirability affects responses on the VEIS. As noted in the introduction, there have been historical concerns that this may be such a significant factor in ethics related research that it could prevent constructs such as virtue ethics from being measured. However, the evidence obtained in this series of studies argues against this hypothesis. The obtained results suggest that a relatively small portion of the variance in participant's responses is attributable to socially desirable responding. While there is a significant correlation

between individuals' social desirability responses, the strength of the association is small, and the proportion of remaining variance attributable to variation associated with ethical constructs is large.

The analyses conducted to further assist in understanding the convergent and divergent characteristics of the questionnaire also yielded supporting results. Those items anticipated to have higher correlations due to construct overlap do in fact have higher correlation coefficients than the averaged divergent items on the VIA measure.

Evaluation of the relationship of individual's stage of moral reasoning with the VEIS also provided promising results, in spite of a number of problems encountered with the analysis of the DIT data. The trend of the data clearly shows a positive relationship between stage of moral reasoning and higher scores on the VEIS. This is the relationship that was hypothesized to exist, and it supports the argument that the VEIS is measuring constructs related to, but distinct from, moral reasoning. There are a number of reasons that a stronger relationship was not observed, but the most likely explanation is that the sample on which these investigations were conducted is comparatively homogeneous in age, education and ethnicity.

It is important to address the pattern of gender differences that were obtained in these studies. The robust finding that women's responses are higher than men's responses on the VEIS should be interpreted with caution. There are a number of reasons that a pattern such as this would occur, ranging from underlying differences between men and women in how they interpret the questions presented, to the nature of differences between what women and men consider to be important values. Information from the literature on

moral reasoning may indicate one of the reasons for this pattern. Women typically score higher on measures of moral reasoning when they are presented from a “care” orientation, whereas men tend to respond higher on measures that are evaluating moral reasoning from a “justice” perspective. It is possible that the manner in which questions are worded may unintentionally tap into this difference between men and women. It is important that these observed gender differences do not indicate superiority of virtue ethics related beliefs between men and women, but that for some reason men and women differ in the degree to which they endorse items on the VEIS. There are also other potential causes upon which one could speculate, including the fact that the items were written primarily by a female researcher.

In evaluating the items designed to check participant’s discrimination of responses, conflicting findings were observed, and this is believed to be primarily due to a weakness in the construction of the response scale. The problem of the wording on the response scale clearly needs to be remedied for future versions of the VEIS. To prevent the problems of responding observed, the following response format is recommended:

- 0 = I don’t think my behavior in this type of situation matters to me at all
- 1 = I think it is very important for me to never act in this way
- 2 = I think it is important to refrain from acting this way most of the time
- 3 = I think it is important for me to not act in this way some of the time
- 4 = I think it is important for me to act in this way sometimes
- 5 = I think it is important for me to act this way more often than not
- 6 = I think it is very important for me to act in this way all the time

This modification moves the neutral response to the polar end of the response axis.

Adjusting the response scale in this manner could prevent the unanticipated pattern of responses obtained in the infrequency and positive endorsement items. However, even



without this modification there was evidence that most individuals do respond as anticipated, thus justifying the inclusion of one infrequency item and one positive endorsement item on the new version of the VEIS.

The factor analytic results were not fully consistent with the expectations for this questionnaire, moreover, the obtained results are somewhat problematic for the interpretation of the measure. The analysis conducted on the 27 item VEIS, the VEIS-R, did successfully identify four factors, however the items that load onto those four factors diverge significantly from our theorized structure. While the first factor appears to be a good index that could be called “virtue ethics”, the existence of four clearly distinct constructs, benevolence, integrity, prudence, and respect, was not found.

Interestingly, the reverse coding factor did not dominate the results of the factor analysis in the Master’s research as it has in this set of investigations. There are a number of reasons for which this may have occurred. The Master’s version was significantly shorter than the 74 item VEIS, with only 40 items. In addition, it had significantly fewer reverse coded items. It is possible that the shorter version facilitates the emergence of the four factor structure because it is unaffected by participant fatigue. Whatever the source of the influence may have been, it is clear that the addition of a large number of reverse coded items, in combination with a long measure (74 items) is not an improvement on the factor structure of the measure. A thorough analysis of the results of the factor analysis appears to be premature, given the substantial modifications recommended for the measure.

### Limitations

There are a number of specific limitations in this study, perhaps the most important of which regards the issue of generalizability to more diverse populations. The sample of individuals used in this study is a relatively homogeneous sample, comprised primarily of Caucasian college students. Thus, there is little variation in age or socioeconomic status among our sample. Obviously, any future research involving this measure needs to consider the performance of the measure in populations that are demographically and ethnically different from this sample.

Additionally, it is problematic that there are no instruments available to help more concretely determine the convergent and divergent validity of the VEIS. The one measure that is most similar, the VIA, which is currently under development, does not have published reliability or validity data available. This circumstance limits the degree of degree of confidence which can be placed on the validity results.

Finally, it is important to note that individuals participating in these studies were completing numerous measures in one session, which may have altered response styles in some unpredictable manner. The version of the VEIS that individuals completed for the research pertinent to this dissertation was a lengthy questionnaire, which in all likelihood affected the manner in which individuals responded. It is important to note that while many of the analyses presented utilized only 27 items from the measure, when individuals completed those items, they did so as part of a longer 74 item questionnaire, and which they completed in conjunction with a number of other questionnaires.

### Future investigations

Perhaps the most interesting future investigation would be administering the VEIS questionnaire to samples of the population expected to differ on the constructs of interest to ensure that the measure has the ability to discriminate between individuals we would expect to have higher scores on measures of ethical importance and those we would expect to have lower scores. A serious difficulty is encountered in determining which groups of people would be appropriate for such investigations. However, contrasting groups such as seminarians versus incarcerated felons may be considered.

Perhaps a more achievable set of studies designed to understand how effective the measure is in detecting group differences would be to administer the VEIS as a pre and post measure in a course designed to encourage ethical development. An example of this type of setting would be a course on counselor ethics. The results from such a study would help determine how virtue ethics are impacted by training interventions.

This leads to another important discussion point regarding the nature of beliefs regarding virtue ethics. The assumption regarding these beliefs is that they are relatively trait-like in nature and characteristically stable over time. In adulthood, these beliefs likely change on the basis of life experience as well as specialized training, but are generally believed to be somewhat resistant to significant fluctuations. This assumption was given direct address in the related body of Masters' research, and the interested reader can consult that text (Swaim, 2001).

In closing, this dissertation has described the continuing development of the VEIS, a newly constructed and validated measure of the importance of four virtue ethics

in individuals' lives. Future developments should include the collection of a new set of data on the revised 27 item VEIS-R measure. This effort should involve a large sample data collection. Moreover, the most appropriate analysis to further research on this data would be to split the sample in half, and conduct an exploratory factor analysis on a portion of the sample in an attempt to replicate the presence of the four factors identified in the previous master's research. Once this step was achieved, then the second half of the sample would be subjected to a confirmatory analysis on this most recent version of the scale prior to publication of the measure.

It is important to reiterate that a confirmatory factor analysis was not conducted during this phase of the research. As a result it is not known how much of the variance explained is a result of the method of the test construction, and how much actually represents individual differences in regard to the virtue ethics constructs under investigation. These considerations make it important to conduct confirmatory factor analyses that examine the presence or absence of one factor versus four factors on the data that will be collected in the future. In these future analyses this can be investigated by running different models utilizing varying specifications, such as altering the assumptions about the degree to which the factors are correlated. This may allow for the more subtle underlying virtue ethics dimensions to be seen once the potentially overwhelming method variance is appropriately controlled for statistically.

In addition to a new series of factor analyses, because of the small sample size obtained for the test-retest reliability analyses, the temporal stability aspect of the study should be replicated with the goal of obtaining a sufficient sample size.

In future research investigations it will be important to establish if variations in self-report are uniquely associated with differences in behavior. For example, it would be of interest to know if people behave in a manner that is consistent with their patterns of endorsement on these four virtue ethics dimensions as evaluated by a self report instrument.

## APPENDIX A

## HUMAN SUBJECTS REVIEW FORMS

# Study 1 Signature Page

## Iowa State University Human Subjects Review Form

OFFICE USE ONLY  
EXPEDITED X FULL COMMITTEE        ID# 03-155

**PI Last Name** Swaim **Title of Project** Personality, interests and health correlates

### Checklist for Attachments

**The following are attached (please check):**

13. ☐ Letter or written statement to subjects indicating clearly:
- a) the purpose of the research & a statement that the study involves research
  - b) the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see item 18)
  - c) an estimate of time needed for participation in the research
  - d) if applicable, the location of the research activity
  - e) how you will ensure confidentiality
  - f) in a longitudinal study, when and how you will contact subjects later
  - g) that participation is voluntary; nonparticipation will not affect evaluations of the subject
  - h) contact information of the P.I. and if a student project, the major professor or supervising faculty member's contact information
14. ☐ A copy of the consent form (if applicable)
15. ☐ Letter of approval for research from cooperating organizations or institutions (if applicable)
16. ☐ Data-gathering instruments
17. ☐ Recruitment fliers or any other documents the subjects will see

18. Anticipated dates for contact with subjects. If using secondary data, the start date will be when the PI has access to and starts to use the data. Allow at least two weeks for review of your proposal before your anticipated start date.

First contact  
10/17/02  
Month/Day/Year

**Last contact**  
05/01/02  
Month/Day/Year

19. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

05/02/03  
Month/Day/Year

20. Signature of Departmental Executive Officer \_\_\_\_\_ Date \_\_\_\_\_ Department or Administrative Unit \_\_\_\_\_

F. Gibson (for C. Anderson) 10/9/02 PSYCH.  
If the PI or co-PI is also the DEO, a Dean signature authority must sign here.

21. Initial action by the Institutional Review Board (IRB):

☒ Project approved \_\_\_\_\_ ☐ Pending Further Review \_\_\_\_\_ ☐ Project not approved \_\_\_\_\_  
Date Date Date  
☐ No action required \_\_\_\_\_  
Date

22. Follow-up action by the IRB:

Project approved ☐ Project not approved ☒ Date \_\_\_\_\_ Project not resubmitted ☐ Date \_\_\_\_\_

Rick Sharp  
IRB Chairperson

Project not approved \_\_\_\_\_ Date \_\_\_\_\_  
 Project not resubmitted \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of IRB Chairperson \_\_\_\_\_ Date 10/17/02

## Study 2 Signature Page

<b>OFFICE USE ONLY</b>		<b>IRB</b>	IRB Approval Date: <u>3/26/03</u>
Project ID# <u>03-155</u>		<b>MAR 14 2003</b>	Remains EXEMPT
Oracle ID# _____			per 45 CFR 46.101(b): _____ Date: _____
			IRB Expiration Date: <u>10/16/03</u> 3 yr <u>3/26/03</u>

**Iowa State University**  
**Continuing Review and/or Modification of Research Involving Human Subjects**

(Please type the information on this form)  
 Submit one copy of this form & changed documents to the Human Subjects Research Office, 2810 Beardshear Hall  
<http://grants-svr.admin.iastate.edu/VPR/humansubjects.html>  
**\*\*Please submit updated consent documents for current approval.\*\***

**SECTION I: PI/Project Information**

- I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I agree that all key personnel involved in conducting human subjects research will receive training in the protection of human subjects. I agree to request renewal of approval for any project continuing more than one year.
- Type of Submission: ☐ Continuing Review (fill in sections I & II) (Continuing Review can only be approved up to 30 days prior to the project's original approval date)  
☒ \* Modification (fill in sections I & III)  
☐ Continuing Review & Modification (fill in sections I, II, & III)  
☐ Modification for Exempt protocol
- Date of Last IRB Approval: 10/17/2002
- IRB ID #: 03-155
- Title of Project (if title has changed since original approval, please provide both titles): Personality, interests, and health correlates
- Funding Source: n/a
- Have key personnel been added since last approval? ☐ No ☒ Yes If yes, please list. (see part III for signature requirements) \_\_\_\_\_

Jennifer C. Swaim  
 Typed name of principal investigator

3/13/03  
 Date

Jennifer C. Swaim  
 Signature of principal investigator

Psychology  
 Department

W113 Lagomarcino Hall  
 Address for correspondence

294-8759 jswaim@iastate.edu  
 Phone number and email

If student project:

Typed name of major professor or supervisor  
Norman A. Scott

3/13/03  
 Date

Norman A. Scott  
 Signature

Rick Sharp  
 IRB Chair

Rick Sharp  
 Signature of IRB Chair

3/26/03  
 IRB Review Date

*I have reviewed the proposed modifications and recommended approval.*

(3/13/03)

F. K. Gibbons  
 on CRA 18 Anderson / Psychology

4-26424

1. My first impressions of people usually turn out to be right.
2. It would be hard for me to break any of my bad habits.
3. I don't care to know what other people really think of me.
4. I have not always been honest with myself.
5. I always know why I like things.
6. When my emotions are aroused, it biases my thinking.
7. Once I've made up my mind, other people can seldom change my opinion.
8. I am not a safe driver when I exceed the speed limit.
9. I am fully in control of my own fate.
10. It's hard for me to shut off a disturbing thought.
11. I never regret my decisions.
12. I sometimes loose out on things because I can't make up my mind soon enough.
13. The reason I vote is because my vote can make a difference.
14. My parents were not always fair when they punished me.
15. I am a completely rational person.
16. I rarely appreciate criticism.
17. I am very confident of my judgments.
18. I have sometimes doubted my ability as a lover.
19. It's all right with me if some people happen to dislike me.
20. I don't always know the reasons why I do the things I do.
21. I sometimes tell lies if I have to.
22. I never cover up my mistakes.
23. There have been occasions when I have taken advantage of someone.
24. I never swear.
25. I sometimes try to get even rather than forgive and forget.
26. I always obey laws, even if I am unlikely to get caught.
27. I have said something bad about a friend behind his or her back.
28. When I hear people talking privately, I avoid listening.
29. I have received too much change from a salesperson without telling him or her.
30. I always declare everything at customs.
31. When I was young I sometimes stole things.
32. I have never dropped litter on the street.
33. I sometimes drive faster than the speed limit.
34. I never read sexy books or magazines.
35. I have done things that I don't tell other people about.
36. I never take things that don't belong to me.
37. I have taken sick-leave from work or school even though I wasn't really sick.
38. I have never damaged a library book or store merchandise without reporting it.
39. I have some pretty awful habits.
40. I don't gossip about other people's business.



## Revised VEIS

Please read the scale and each question carefully. In this questionnaire we are interested in knowing more about **how important you think it is for you to act** in a given situation. Many of the situations are similar to one another, so please choose your responses carefully, and try to consider whether or not the behavior described is genuinely important to you or not. Please fill in the corresponding numbers on the bubble sheet using the following scale:

- 1 = I think it is very important for me to never act in this way  
 2 = I think it is important to refrain from acting this way most of the time  
 3 = I think it is important for me to not act in this way some of the time  
 4 = I don't think my behavior in this type of situation matters to me at all  
 5 = I think it is important for me to act in this way sometimes  
 6 = I think it is important for me to act this way more often than not  
 7 = I think it is very important for me to act in this way all the time
1. Be pleasant with peers even when they are not pleasant with you.
  2. Make decisions only after gathering information from different sources.
  3. Refrain from arguing with your parents or elders.
  4. "Sleeping" on it before making a major decision.
  5. Try hard to be punctual.
  6. Walk in three circles around your car to prevent getting a parking ticket.
  7. Help others without expecting anything in return.
  8. Strictly uphold all aspects of academic integrity.
  9. Return incorrect change.
  10. Create a budget to manage your money.
  11. Holding to an external moral code (such as the boy scouts, honor codes, etc.)
  12. Hold the door open for someone else coming in or out through the same door.
  13. Cram for exams instead of studying consistently through the semester.
  14. Treat people kindly even when you are having a bad day.
  15. Be genuine in your interactions with others.
  16. Allow someone with different beliefs to express themselves.
  17. Be very careful to never step on small cracks in the sidewalk.
  18. Always seek more than one medical opinion for an important health diagnosis.
  19. Always tell the truth.
  20. Returning (or making the best effort to do so) a found wallet.
  21. Never let yourself get intoxicated from alcohol.
  22. Do above and beyond the basic requirements for a job.
  23. Volunteer even if it isn't always very convenient.
  24. Permit someone right of way when driving.
  25. Carefully consider the needs of others.
  26. Hold to the commitments that you make.
  27. Working more for long term satisfaction than for immediate gratification.
  28. Observe basic courtesies (like saying please and thank you) where appropriate.
  29. Live up to your personal standards.
  30. Make sure you spend at least a little time each week talking to friends.
  31. Acknowledge when you don't understand something.
  32. Refrain from talking during a lecture.
  33. Be generous to people you think need your assistance.
  34. Never litter.
  35. Treat others as you would like to be treated.
  36. Feel irritated when other people act like they need your help.
  37. Write a letter in support of a political belief or issue.

38. Strictly uphold all aspects of academic integrity.
39. Always assert your own opinion.
40. Making a decision without complete information.
41. Do just enough of a task to get the job done.
42. When someone yells at you, yell right back at them.
43. Not be overly concerned with being right on time to appointments.
44. Act quickly and decisively without too much concern for long term consequences.
45. Bending the rules when a situation demands it.
46. Always take care of your own concerns before those of anyone else.
47. Only balance your checkbook if there might be a problem.
48. Push your way through a crowd when you are in a hurry.
49. Review your notes for classes every day.
50. Feeling irritated when other people seem to need your help.
51. Return something to a store that you have used, but has nothing wrong with it.
52. In a discussion, making sure everyone agrees with your opinion.
53. Have complete trust in the wisdom of your medical doctor.
54. Only help others when you have the time.
55. Gain unfair advantage from someone else's mistake.
56. Being able to handle drinking more than 2 alcoholic drinks an hour.
57. Tell a while lie to prevent problems.
58. Volunteer at least 30% of your time and/or money to charities.
59. Tailgate someone who's driving too slow in front of you.
60. When things go wrong take it out on those around you.
61. Making sure you get what you want as soon as possible.
62. Allow others to worry about social and political concerns.
63. Not wasting your time and energy on formalities.
64. Acting unusually kind to someone only because you want something from them.
65. Bending rules to fit each situation as needed.
66. Calm yourself before exams by shuffling playing cards.
67. If you have something to say, interrupting during a presentation.
68. Always act as if you know something during a conversation, even if you do not.
69. Only volunteer for someone who can also help you.
70. Agree to do something you know you aren't going to do.
71. Allow others to clean up after you.
72. Brush your teeth at least once a day.
73. Making sure you take care of yourself before anything else is considered.
74. Manipulate people to get things done when you need to.

## Modified VIA

We are developing a questionnaire to measure a person's strengths. Choose one option in response to each statement. All of the questions reflect statements that many people would find desirable, but we want you to answer only in terms of **whether the statement describes what you are like**. Please be honest and accurate! Because the questionnaire is long, work quickly, and trust your first response. Thank you.

1	2	3	4	5
very much like me	like me	neutral	unlike me	very much unlike me

I am very aware of my surroundings  
 I always keep my promises.  
 I am always humble about the good things that have happened to me.  
 It is important to me that I live in a world of beauty  
 I have never deliberately hurt anyone  
 I have no trouble eating healthy foods.  
 I never miss group meetings or team practices.  
 I am never too busy to help a friend.  
 I know how to handle myself in different social situations  
 My friends tell me that I know how to keep things real.  
 I do not like to stand out in a crowd.  
 The goodness of other people almost brings tears to my eyes.  
 "Better safe than sorry" is one of my favorite mottoes.  
 Even when candy or cookies are under my nose, I never pig out on them.  
 I really enjoy being a part of a group.  
 I really enjoy doing small favors for friends.  
 No matter what the situation, I am able to fit in.  
 I believe honesty is the basis for trust.  
 I do not act as if I am special person  
 I experience deep emotions when I see beautiful things.  
 I always think before I speak.  
 I am a highly disciplined person.  
 I am an extremely loyal person.  
 I go out of my way to cheer up people who appear down.  
 I have the ability to make other people feel interesting.  
 I tell the truth even if it hurts.  
 I never brag about my accomplishments.  
 I see beauty that other people pass by without noticing.  
 My friends believe that I make smart choices about what I say & do  
 I control my emotions.  
 I work at my very best when I am a group member.  
 I love to make other people happy.  
 I always know what makes someone tick.  
 My promises can be trusted.  
 I am proud that I am an ordinary person.  
 I have often been left speechless by the beauty depicted in a movie.

I always avoid activities that are physically dangerous.  
 I never bad-mouth my group to outsiders.  
 I have voluntarily helped a neighbor in the last month.  
 I never want things that are bad for me in the long run, even if they  
     make me feel good in the short run.  
 I always get along well with people I have just met.  
 I am true to my own values.  
 I prefer to let other people talk about themselves.  
 I am always aware of the natural beauty in the environment.  
 I think through the consequences every time before I act.  
 I can always stay on a diet.  
 It is important for me to maintain harmony within my group.  
 I always call my friends when they are sick.  
 I am good at sensing what other people are feeling.  
 I take pride in not exaggerating who or what I am.  
 I rarely call attention to myself.  
 I greatly appreciate all forms of art.  
 I always keep straight right from wrong.  
 I can always say "enough is enough."  
 Without exception, I support my teammates or fellow group members.  
 I am as excited about the good fortune of others as I am about my own.  
 I am aware of my own feelings and motives.  
 I would rather die than be phony.  
 I have been told that modesty is one of my most notable characteristics.  
 I am in awe of simple things in life that others might take for granted  
 I am a very careful person.  
 Even if I disagree with them, I always respect the leaders of my group.  
 I enjoy being kind to others.  
 I always know what to say to make people feel good.  
 My friends always tell me I am down to earth.  
 No one would ever describe me as arrogant.  
 I often have a craving to experience art, such as music, drama, or paintings.  
 I always make careful choices.  
 For me, practice is as important as performance.  
 It is important to me to respect decisions made by my group.  
 I am thrilled when I can let others share the spotlight.  
 It is rare that someone can take advantage of me.  
 Others trust me to keep their secrets.  
 People are drawn to me because I am humble.  
 I have created something of beauty in the last year.  
 I cannot imagine lying or cheating.  
 I exercise on a regular basis.  
 I gladly sacrifice my self-interest for the benefit of the group I am in.  
 I always listen to people talk about their problems.  
 Without exception, I do my tasks at work or school or home by the time they are due.

## Defining Issues Test

# ***DIT-2***

Defining Issues Test

Version 3.0

University of Minnesota  
Center for Research in Ethical Development

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## **Instructions**

This questionnaire is concerned with how you define the issues in a social problem. Several stories about social problems will be described. After each story, there will be a list of questions. The questions that follow each story represent different issues that might be raised by the problem. In other words, the questions/issues raise different ways of judging what is important in making a decision about the social problem. You will be asked to rate and rank the questions in terms of how important each one seems to you.

This questionnaire is in two parts: one part contains the **INSTRUCTIONS** (this part) and the stories presenting the social problems; the other part contains the questions (issues) and the **ANSWER SHEET** on which to write your responses.

Here is an example of the task:

### **Presidential Election**

Imagine that you are about to vote for a candidate for the Presidency of the United States. Imagine that before you vote, you are given several questions, and asked which issue is the most important to you in making up your mind about which candidate to vote for. In this example, 5 items are given. On a rating scale of 1 to 5 (1=Great, 2=Much, 3=Some, 4=Little, 5=No) please rate the importance of the item (issue) by filling in with a pencil one of the bubbles on the answer sheet by each item.

Assume that you thought that item #1 (below) was of great importance, item #2 had some importance, item #3 had no importance, item #4 had much importance, and item #5 had much importance. Then you would fill in the bubbles on the answer sheet as shown below.

1	2	3	4	5	
G	M	S	L	N	
r	u	o	i	o	
e	c	m	t		
a	b	e	t		
t			l		
			e		

	Item #:					
<input checked="" type="radio"/>	0	0	0	0	0	1. Financially are you personally better off now than you were four years ago?
0	0	<input checked="" type="radio"/>	0	0	0	2. Does one candidate have a superior personal moral character?
0	0	0	0	<input checked="" type="radio"/>	0	3. Which candidate stands the tallest?
0	<input checked="" type="radio"/>	0	0	0	0	4. Which candidate would make the best world leader?
0	<input checked="" type="radio"/>	0	0	0	0	5. Which candidate has the best ideas for our country's internal problems, like crime and health care?

Further, the questionnaire will ask you to rank the questions in terms of importance. In the space below, the numbers at the top, 1 through 12, represent the item number. From top to bottom, you are asked to fill in the bubble that represents the item in first importance (of those given you to choose from), then second most important, third most important, and fourth most important. Please indicate your top four choices. You might fill out this part, as follows:

Item number:	1	2	3	4	5	6	7	8	9	10	11	12
Most important item	<input checked="" type="radio"/>	0	0	0	0	0	0	0	0	0	0	0
Second most important	0	0	0	0	<input checked="" type="radio"/>	0	0	0	0	0	0	0
Third most important	0	0	0	<input checked="" type="radio"/>	0	0	0	0	0	0	0	0
Fourth most important	0	<input checked="" type="radio"/>	0	0	0	0	0	0	0	0	0	0

Note that some of the items may seem irrelevant to you (as in item #3) or not make sense to you--in that case, **rate** the item as "No" importance and do not **rank** the item. Note that in the stories that follow, there will be 12 items for each story, not five. Please make sure to consider all 12 items (questions) that are printed after each story.

In addition you will be asked to state your preference for what action to take in the story. After the story, you will be asked to indicate the action you favor on a seven-point scale (1=strongly favor some action, 7=strongly oppose that action).

In short, read the story from this booklet, then fill out your answers on the answer sheet. Please use a #2 pencil. If you change your mind about a response, erase the pencil mark cleanly and enter your new response.

*[Notice the second part of this questionnaire, the Answer Sheet. The Identification Number at the top of the answer sheet may already be filled in when you receive your materials. If not, you will receive instructions about how to fill in the number. If you have questions about the procedure, please ask now.]*

*Please turn now to the Answer Sheet.]*

---

**Famine —(Story #1)**

The small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.

*[If at any time you would like to reread a story or the instructions, feel free to do so. Now turn to the Answer Sheet, go to the 12 issues and rate and rank them in terms of how important each issue seems to you.]*

---

**Reporter —(Story #2)**

Molly Dayton has been a news reporter for the *Gazette* newspaper for over a decade. Almost by accident, she learned that one of the candidates for Lieutenant Governor for her state, Grover Thompson, had been arrested for shop-lifting 20 years earlier. Reporter Dayton found out that early in his life, Candidate Thompson had undergone a confused period and done things he later regretted, actions which would be very out-of-character now. His shop-lifting had been a minor offense and charges had been dropped by the department store. Thompson has not only straightened himself out since then, but built a distinguished record in helping many people and in leading constructive community projects. Now, Reporter Dayton regards Thompson as the best candidate in the field and likely to go on to important leadership positions in the state. Reporter Dayton wonders whether or not she should write the story about Thompson's earlier troubles because in the upcoming close and heated election, she fears that such a news story could wreck Thompson's chance to win.

*[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]*

---

**School Board --(Story #3)**

Mr. Grant has been elected to the School Board District 190 and was chosen to be Chairman. The district is bitterly divided over the closing of one of the high schools. One of the high schools has to be closed for financial reasons, but there is no agreement over which school to close. During his election to the School Board, Mr. Grant had proposed a series of "Open Meetings" in which members of the community could voice their opinions. He hoped that dialogue would make the community realize the necessity of closing one high school. Also he hoped that through open discussion, the difficulty of the decision would be appreciated, and that the community would ultimately support the school board decision. The first Open Meeting was a disaster. Passionate speeches dominated the microphones and threatened violence. The meeting barely closed without fist-fights. Later in the week, school board members received threatening phone calls. Mr. Grant wonders if he ought to call off the next Open Meeting.

*[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]*

---

**Cancer --(Story #4)**

Mrs. Bennett is 62 years old, and in the last phases of colon cancer. She is in terrible pain and asks the doctor to give her more pain-killer medicine. The doctor has given her the maximum safe dose already and is reluctant to increase the dosage because it would probably hasten her death. In a clear and rational mental state, Mrs. Bennett says that she realizes this; but she wants to end her suffering even if it means ending her life. Should the doctor give her an increased dosage?

*[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]*

---

**Demonstration --(Story #5)**

Political and economic instability in a South American country prompted the President of the United States to send troops to "police" the area. Students at many campuses in the U.S.A. have protested that the United States is using its military might for economic advantage. There is widespread suspicion that big oil multinational companies are pressuring the President to safeguard a cheap oil supply even if it means loss of life. Students at one campus took to the streets in demonstrations, tying up traffic and stopping regular business in the town. The president of the university demanded that the students stop their illegal demonstrations. Students then took over the college's administration building, completely paralyzing the college. Are the students right to demonstrate in these ways?

*[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]*





**School Board -- (Story #3)***Do you favor calling off the next Open Meeting?*

- ① Should call off the next open meeting    ② Can't decide    ③ Should have the next open meeting

GREAT  
MUCH  
SOME  
LITTLE  
NO

*Rate the following 12 issues in terms of importance (1-5)*

- ① ② ③ ④ ⑤ 1. Is Mr. Grant required by law to have Open Meetings on major school board decisions?
- ① ② ③ ④ ⑤ 2. Would Mr. Grant be breaking his election campaign promises to the community by discontinuing the Open Meetings?
- ① ② ③ ④ ⑤ 3. Would the community be even angrier with Mr. Grant if he stopped the Open Meetings?
- ① ② ③ ④ ⑤ 4. Would the change in plans prevent scientific assessment?
- ① ② ③ ④ ⑤ 5. If the school board is threatened, does the chairman have the legal authority to protect the Board by making decisions in closed meetings?
- ① ② ③ ④ ⑤ 6. Would the community regard Mr. Grant as a coward if he stopped the open meetings?
- ① ② ③ ④ ⑤ 7. Does Mr. Grant have another procedure in mind for ensuring that divergent views are heard?
- ① ② ③ ④ ⑤ 8. Does Mr. Grant have the authority to expel troublemakers from the meetings or prevent them from making long speeches?
- ① ② ③ ④ ⑤ 9. Are some people deliberately undermining the school board process by playing some sort of power game?
- ① ② ③ ④ ⑤ 10. What effect would stopping the discussion have on the community's ability to handle controversial issues in the future?
- ① ② ③ ④ ⑤ 11. Is the trouble coming from only a few hotheads, and is the community in general really fair-minded and democratic?
- ① ② ③ ④ ⑤ 12. What is the likelihood that a good decision could be made without open discussion from the community?

*Rank which issue is the most important (item number).*

- Most important item    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫    Third most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
- Second most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫    Fourth most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

*Now please return to the Instructions booklet for the next story.***Cancer -- (Story #4)***Do you favor the action of giving more medicine?*

- ① Should give Mrs. Bennett an increased dosage to make her die    ② Can't decide    ③ Should not give her an increased dosage

GREAT  
MUCH  
SOME  
LITTLE  
NO

*Rate the following 12 issues in terms of importance (1-5)*

- ① ② ③ ④ ⑤ 1. Isn't the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her?
- ① ② ③ ④ ⑤ 2. Wouldn't society be better off without so many laws about what doctors can and cannot do?
- ① ② ③ ④ ⑤ 3. If Mrs. Bennett dies, would the doctor be legally responsible for malpractice?
- ① ② ③ ④ ⑤ 4. Does the family of Mrs. Bennett agree that she should get more painkiller medicine?
- ① ② ③ ④ ⑤ 5. Is the painkiller medicine an active hallucinogenic drug?
- ① ② ③ ④ ⑤ 6. Does the state have the right to force continued existence on those who don't want to live?
- ① ② ③ ④ ⑤ 7. Is helping to end another's life ever a responsible act of cooperation?
- ① ② ③ ④ ⑤ 8. Would the doctor show more sympathy for Mrs. Bennett by giving the medicine or not?
- ① ② ③ ④ ⑤ 9. Wouldn't the doctor feel guilty from giving Mrs. Bennett so much drug that she died?
- ① ② ③ ④ ⑤ 10. Should only God decide when a person's life should end?
- ① ② ③ ④ ⑤ 11. Shouldn't society protect everyone against being killed?
- ① ② ③ ④ ⑤ 12. Where should society draw the line between protecting life and allowing someone to die if the person wants to?

*Rank which issue is the most important (item number).*

- Most important item    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫    Third most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
- Second most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫    Fourth most important    ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

*Now please return to the Instructions booklet for the next story.*

PLEASE DO NOT WRITE IN THIS AREA

**Demonstration -- (Story #5)***Do you favor the action of demonstrating in this way?*

- ① Should continue demonstrating in these ways    ② Can't decide    ③ Should not continue demonstrating in these ways

GREAT  
MUCH  
SOME  
LITTLE  
NO

**Rate the following 12 issues in terms of importance (1-5)**

- |           |   |
|-----------|---|
| ① 2 3 4 5 | 1. Do the students have any right to take over property that doesn't belong to them?                  |
| ① 2 3 4 5 | 2. Do the students realize that they might be arrested and fined, and even expelled from school?      |
| ① 2 3 4 5 | 3. Are the students serious about their cause or are they doing it just for fun?                      |
| ① 2 3 4 5 | 4. If the university president is soft on students this time, will it lead to more disorder?          |
| ① 2 3 4 5 | 5. Will the public blame all students for the actions of a few student demonstrators?                 |
| ① 2 3 4 5 | 6. Are the authorities to blame by giving in to the greed of the multinational oil companies?         |
| ① 2 3 4 5 | 7. Why should a few people like Presidents and business leaders have more power than ordinary people? |
| ① 2 3 4 5 | 8. Does this student demonstration bring about more or less good in the long run to all people?       |
| ① 2 3 4 5 | 9. Can the students justify their civil disobedience?   |
| ① 2 3 4 5 | 10. Shouldn't the authorities be respected by students?   |
| ① 2 3 4 5 | 11. Is taking over a building consistent with principles of justice?                                  |
| ① 2 3 4 5 | 12. Isn't it everyone's duty to obey the law, whether one likes it or not?                            |

*Rank which issue is the most important (item number).*

Most important item ① 2 3 4 5 6 7 8 9 10 11 12

Third most important ① 2 3 4 5 6 7 8 9 10 11 12

Second most important ① 2 3 4 5 6 7 8 9 10 11 12

Fourth most important ① 2 3 4 5 6 7 8 9 10 11 12

**Please provide the following information about yourself:**

1. Age in years:

0	6
1	7
2	8
3	9
4	0
5	1
6	2
7	3
8	4
9	5

2. Sex (mark one): ☐ Male ☐ Female

3. Level of Education (mark highest level of formal education attained, if you are currently working at that level [e.g., Freshman in college] or if you have completed that level [e.g., if you finished your Freshman year but have gone on no further].)

- ☐ Grade 1 to 6
- ☐ Grade 7, 8, 9
- ☐ Grade 10, 11, 12
- ☐ Vocational/technical school (without a bachelor's degree) (e.g., Auto mechanic, beauty school, real estate, secretary, 2-year nursing program).
- ☐ Junior college (e.g., 2-year college, community college, Associate Arts degree)
- ☐ Freshman in college in bachelor degree program.
- ☐ Sophomore in college in bachelor degree program.
- ☐ Junior in college in bachelor degree program.
- ☐ Senior in college in bachelor degree program.
- ☐ Professional degree (Practitioner degree beyond bachelor's degree) (e.g., M.D., M.B.A., Bachelor of Divinity, D.D.S. in Dentistry, J.D. in law, Masters of Arts in teaching, Masters of Education [in teaching], Doctor of Psychology, Nursing degree along with 4-year Bachelor's degree)
- ☐ Masters degree (in academic graduate school)
- ☐ Doctoral degree (in academic graduate school, e.g., Ph.D. or Ed.D.)
- ☐ Other Formal Education. (Please describe: \_\_\_\_\_)

4. In terms of your political views, how would you characterize yourself (mark one)?

- ☐ Very Liberal
- ☐ Somewhat Liberal
- ☐ Neither Liberal nor Conservative
- ☐ Somewhat Conservative
- ☐ Very Conservative

5. Are you a citizen of the U.S.A.?

- ☐ Yes ☐ No

6. Is English your primary language?

- ☐ Yes ☐ No

**Thank You.**

PLEASE DO NOT WRITE IN THIS AREA

**Dilemma #6***Do you favor the action?*

① Strongly Favor   ② Favor   ③ Slightly Favor   ④ Neutral   ⑤ Slightly Disfavor   ⑥ Disfavor   ⑦ Strongly Disfavor

GREAT  
MUCH  
SOME  
LITTLE  
NO

*Rate the following 12 issues in terms of importance (1-5)*

① ② ③ ④ ⑤	1.
① ② ③ ④ ⑤	2.
① ② ③ ④ ⑤	3.
① ② ③ ④ ⑤	4.
① ② ③ ④ ⑤	5.
① ② ③ ④ ⑤	6.
① ② ③ ④ ⑤	7.
① ② ③ ④ ⑤	8.
① ② ③ ④ ⑤	9.
① ② ③ ④ ⑤	10.
① ② ③ ④ ⑤	11.
① ② ③ ④ ⑤	12.

*Rank which issue is the most important (item number).*

Most important item   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫  
 Second most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

Third most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫  
 Fourth most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

**Dilemma #7***Do you favor the action?*

① Strongly Favor   ② Favor   ③ Slightly Favor   ④ Neutral   ⑤ Slightly Disfavor   ⑥ Disfavor   ⑦ Strongly Disfavor

GREAT  
MUCH  
SOME  
LITTLE  
NO

*Rate the following 12 issues in terms of importance (1-5)*

① ② ③ ④ ⑤	1.
① ② ③ ④ ⑤	2.
① ② ③ ④ ⑤	3.
① ② ③ ④ ⑤	4.
① ② ③ ④ ⑤	5.
① ② ③ ④ ⑤	6.
① ② ③ ④ ⑤	7.
① ② ③ ④ ⑤	8.
① ② ③ ④ ⑤	9.
① ② ③ ④ ⑤	10.
① ② ③ ④ ⑤	11.
① ② ③ ④ ⑤	12.

*Rank which issue is the most important (item number).*

Most important item   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫  
 Second most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

Third most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫  
 Fourth most important   ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

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## APPENDIX C

### INFORMED CONSENT DOCUMENTS

#### Study 1 (session 1)

**Title of Study:** Personality, interests and health correlates

**Investigators:** Jennifer Swaim, M.S., Irina Diyankova, B.S., Amy Jarvis, Beth Nicholas  
& Laura Bergevin

This is a research study. Please take your time in deciding if you want to participate, and feel free to ask questions at any time.

#### INTRODUCTION

The purpose of this study is to assesses the relationship between certain self-reported personality, lifestyle and well being variables. You are being invited to voluntarily participate in this study because you are a student who participated in Department of Psychology mass testing sessions conducted earlier this semester.

#### DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation today will last for about an hour and a half. You may be contacted within six weeks of today's session and asked if you would like to participate in another session which would last for about one hour.

During the study the following procedures will be followed: After reading through this statement you will be given your extra credit card and provided with a packet of questionnaires to answer. To complete these surveys you are asked to confidentially respond to surveys that request information on: things in life that are important to you, how you believe you would act in certain situations, and how satisfied you currently are with your life.

Personally identifying information will not be collected on any of the questionnaires, however you may skip any question that you do not wish to answer or that makes you feel uncomfortable. Once you have finished providing information on the questionnaires and returned them to the researcher, the researcher will provide you with a written explanation of the purpose of the study. After reading this statement you will be provided with contact information for the principal investigator should you have questions or concerns about this study.

#### RISKS

There are no foreseeable risks associated with participation in this study.

#### BENEFITS

If you decide to participate in this study there will be no direct benefit to you other than obtaining extra credit for your class. However, it is hoped that the information gained in this study will benefit society by furthering our understanding of how the characteristics we are studying are related to a person's health and well being.

#### COSTS AND COMPENSATION

You will not have any costs from participating in this study. You will be compensated for participating in this study, in the form of two points of extra credit for your psychology course, as is consistent with psychology department guidelines. Once you read through this form you will receive your extra credit card. If at any point you decide to not continue your participation in the study, you will be

given the two points of extra credit, without penalty. If you choose to participate in a second evaluation session at a later date, you will be awarded an additional point of extra credit, as well as the opportunity to participate in a drawing for one of four cash prizes. Odds of winning are dependent on the total number of participants in this study, but are approximately 1/50.

## PARTICIPANT RIGHTS

**Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time without any penalty or loss of benefits to which you are otherwise entitled.**

## CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: The information you provide today will be assigned a unique code which will be used on forms and in the data set instead of your name. Any information that could be used to identify you will be kept in a secured location separate from the data. The only individual with direct access to this identification information is the principal investigator, who will maintain all identifying information in a locked filing cabinet. All identification information will be destroyed in May 2003. If the results are published, your identity will remain confidential.

## QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study contact the principal investigator, Jennifer Swaim at 294-8759, or via email at [jswaim@iastate.edu](mailto:jswaim@iastate.edu). You may also contact the project supervisor Dr. Norman Scott, 294-1509, or at [nascott@iastate.edu](mailto:nascott@iastate.edu). If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; [meldrem@iastate.edu](mailto:meldrem@iastate.edu) or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; [dament@iastate.edu](mailto:dament@iastate.edu)

## SUBJECT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the contact information for the project supervisor, principal investigator and research subject rights officers at the end of the session.

Subject's Name (printed) \_\_\_\_\_

\_\_\_\_\_  
(Subject's Signature)

\_\_\_\_\_  
(Date)

## INVESTIGATOR STATEMENT

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

\_\_\_\_\_

## Study 1 (session 2)

**Title of Study:** Personality, interests and health correlates

**Investigators:** Jennifer Swaim, M.S., Irina Diyankova, B.S., Amy Jarvis, Beth Nicholas  
& Laura Bergevin

This is a research study. Please take your time in deciding if you want to participate, and feel free to ask questions at any time.

### INTRODUCTION

The purpose of this study is to further assess the relationship between certain self-reported personality, lifestyle and well being. You are being invited to voluntarily participate in this study because you are a student who participated in a similar study conducted earlier in the semester

### DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation today will last for about an hour.

During the study the following procedures will be followed: After reading through this statement you will be given your extra credit card and provided with a packet of questionnaires to answer. To complete these surveys you are asked to confidentially respond to surveys that request information on: things in life that are important to you, how you believe you would act in certain situations, and how satisfied you currently are with your life.

Personally identifying information will not be collected on any of the questionnaires, however you may skip any question that you do not wish to answer or that makes you feel uncomfortable. Once you have finished providing information on the questionnaires and returned them to the researcher, the researcher will provide you with a written explanation of the purpose of the study which includes contact information for the principal investigator should you have questions or concerns about this study.

### RISKS

There are no foreseeable risks associated with participation in this study.

### BENEFITS

If you decide to participate in this study there will be no direct benefit to you other than obtaining extra credit for your class and one entry into a drawing for one of four twenty dollar prizes to be distributed at the end of the Spring 2003 semester. It is hoped that the information gained in this study will benefit society by furthering our understanding of how the characteristics we are studying are related to a person's health and well being.

### COST AND COMPENSATION

You will not have any costs from participating in this study. You will be compensated for participating in this study, in the form of one point of extra credit for your psychology course, as is consistent with psychology department guidelines. Once you read through this form you will receive your extra credit card. If at any point you decide to not continue your participation in the study, you will be given the extra credit, without penalty, as well as the entry into the drawing. Odds of winning are dependent on the total number of participants in this study, but are approximately 1/50.

## PARTICIPANT RIGHTS

**Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time without any penalty or loss of benefits to which you are otherwise entitled.**

## CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: The information you provide today will be assigned a unique code which will be used on forms and in the data set instead of your name. Any information that could be used to identify you will be kept in a secured location separate from the data. The only individual with direct access to this identification information is the principal investigator, who will maintain all identifying information in a locked filing cabinet. All identification information will be destroyed in May 2003. If the results are published, your identity will remain confidential.

## QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study contact the principal investigator, Jennifer Swaim at 294-8759, or via email at [jswaim@iastate.edu](mailto:jswaim@iastate.edu). You may also contact the project supervisor Dr. Norman Scott, 294-1509, or at [nascott@iastate.edu](mailto:nascott@iastate.edu). If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; [meldrem@iastate.edu](mailto:meldrem@iastate.edu) or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; [dament@iastate.edu](mailto:dament@iastate.edu)

\*\*\*\*\*

## SUBJECT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the contact information for the project supervisor, principal investigator and research subject rights officers at the end of the session.

Subject's Name (printed) \_\_\_\_\_

\_\_\_\_\_  
(Subject's Signature)

\_\_\_\_\_  
(Date)

## INVESTIGATOR STATEMENT

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

\_\_\_\_\_  
(Signature of Person Obtaining  
Informed Consent)

\_\_\_\_\_  
(Date)



## Study 2

SPRING 2003  
**MASS-TESTING INFORMED CONSENT** (revised 01/03) ISU IRB No. 1 Approved 1/31/03  
 Expiration 1/30/04

*Rich Shey*  
 1/31/03

Before participating, we would like you to read the following statement along with the session supervisor. The statement also appears as a transparency projected on the screen.

This research project is being conducted by the Iowa State University Psychology Department. If you are under 18 years of age, you are not eligible to participate unless you have already submitted a signed written parental consent form to the course information office, as already explained to you by your course instructor. If you are under 18 and have not yet obtained written parental consent, please identify yourself so that the experimenter can inform you about procedures necessary to become eligible for future participation in experiments, as well as current options, other than experiments, for earning extra credit.

Sometimes in Psychology research, it is necessary to select participants based on certain criteria. The purpose of this session is to gather information on a number of different criteria that will help researchers know whom to contact for their specific projects.

If you decide to participate in this mass-testing session there may be no direct benefit to you other than the opportunity to learn from a participant's perspective about current psychology research projects. It is hoped that information gained from this session will benefit society by selecting the appropriate study population for future studies, and thus produce scientifically valid results. By participating in this session you may be eligible for participation in future research. Moreover, you will receive two extra-credit points for your involvement in this session. If you are eligible for future research, the researchers will contact you, and you may decide at that time if you wish to participate in a project. Because researchers need to be able to contact you, you will be asked for your name, e-mail address, and phone number.

Several researchers have developed the questionnaires and ratings posed during this testing session. Your responses will be assembled in an electronic data file that pairs your responses with your name and identification number. However, only the research investigators associated with the specific set of questions they developed will have access to your responses to that set of questions, not to entire data file. Moreover, all information collected will be kept confidential to the extent permitted by applicable laws and regulations, and will be available only for use by psychology department researchers in approved projects. However, federal government regulatory agencies may inspect and/or copy records for quality assurance and data analysis.

*Please note the following information.*

Participation in this session is completely voluntary. By choosing to complete this signed consent form, you are indicating your voluntary participation in this project. We do not anticipate any risk from participation in this mass-testing session. However, some of the questions may be sensitive in nature, and you may feel uncomfortable in responding to them. You may skip any questions that you are not comfortable answering, without receiving any penalty. If you have any questions, please raise your hand.

You may also contact the following persons concerning any questions you have about this research session.

Dr. Norman Scott, Chair, Psychology Department Human Participants In Research Committee (294-1509), Office W271 Lagomarcino Hall, [nascott@iastate.edu](mailto:nascott@iastate.edu), or Dr. Susan Cross, Psychology Department Research Participation Pool (294-3224), Office W253 Lagomarcino Hall, [scross@iastate.edu](mailto:scross@iastate.edu). If you have additional questions about the rights of research participants please contact Diane Ament, Research Compliance Officer, 2810 Beardshear Hall (294-3115), [dament@iastate.edu](mailto:dament@iastate.edu)

If you want a copy of this form, it is available on the table next to the exit doors from this room.

I have read and understood the information presented on this sheet. I have had the opportunity to ask questions about this research activity and my questions have been satisfactorily answered.

By signing my name below I agree to voluntarily participate in this mass-testing session.

\_\_\_\_\_  
 (Name)

\_\_\_\_\_  
 (Date)

## APPENDIX D

## DEBRIEFING STATEMENTS

## Study 1

## Debriefing statement A

This survey designed to help the researchers continue development of a scale which examines the ways in which people think and act about ethical ideas and situations. The questions on many of the questionnaires you completed are designed to give us information about whether or not an item will be included in the final scale. We are attempting to specifically understand how people think about the ethical principles of benevolence, integrity, prudence and respect. To help us understand the characteristics of this measure you were given 3 questionnaires related to ethical personal ethical or moral values. Additionally, the researchers are interested in how ethical values may be related to one's overall sense of health and well being, so one of the measures completed gathered information relevant to your satisfaction in a number of life areas. Your responses will provide us information on the relationships between questions on each of the ethical principles, as well as information about how scores on each area relate to each of the other areas.

Please do not discuss the subject material of this study, the specific questions involved in the study or your own responses with any of your classmates or friends. If they were to take this survey, the knowledge of your responses could change the way that they respond and confound the data that we are collecting.

If any of you have any questions about the nature of this study, you may contact Jennifer Swaim at 294-8759, or [jswaim@iastate.edu](mailto:jswaim@iastate.edu).

Again, thank you for your participation.

## Study 2

### Debriefing statement B

This survey designed to help the researchers continue development of a scale which examines the ways in which people think and act about ethical ideas and situations. The questions on many of the questionnaires you completed are identical to those you completed in an earlier testing session. This is designed to help us understand whether people's responses change over time on the measures you were given today

Please do not discuss the subject material of this study, the specific questions involved in the study or your own responses with any of your classmates or friends. If they were to take this survey, the knowledge of your responses could change the way that they respond and confound the data that we are collecting.

You will not be contacted again to participate in future research on this study. If you are the winner of the raffle for one of 4 Twenty dollar prizes, you will be contacted by the lead researcher, Jennifer Swaim, at the end of the spring semester.

If any of you have any questions about the nature of this study, you may contact Jennifer Swaim at 294-8759, or [jswaim@iastate.edu](mailto:jswaim@iastate.edu).

Again, thank you for your participation.

## Study 2

**MASS DATA COLLECTION DEBRIEFING STATEMENT**

Thank you for completing the mass data collection packet! Your responses to these questions are *confidential*, and will only be used by the researchers in the Department of Psychology. One of the uses is to select potential participants for extra-credit experiments later on. If you qualify for further research, you may receive a phone call or e-mail from a Psychology Department experimenter some time in the next year (unless you indicated otherwise) to invite you to participate in further research. Such participation is **completely voluntary**.

Responding to questions such as those in the mass testing questionnaires sometimes prompts people to reflect on their lives, feelings, and emotions. Such reflection is common, and may raise thoughts or concerns that you would like to discuss with someone else. In case that this happens to you, please be advised that there are a number of resources available in Ames for such discussion. Please feel free to contact any of the following psychology faculty members and/or agencies.

Dr. Norman Scott, Chair, Psychology Department Human Participants In Research Committee (294-1509), [nascott@iastate.edu](mailto:nascott@iastate.edu), Office W 271 Lagomarcino Hall

Dr. Susan Cross, Chair, Psychology Department Research Participation Pool (294-3224), [scross@iastate.edu](mailto:scross@iastate.edu), Office W 253 Lagomarcino Hall

ISU Counseling Center (294-5056)  
Third floor Student Service Building  
Provides free counseling services to  
ISU students

ACCESS (232-2303)  
Alcoholics Anonymous (232-8642)  
Planned Parenthood (292-1000)  
Birthright (292-8414)

Student Health Service (294-5801)

If you have additional questions about this research study or about the rights of research subjects, please contact the Research Compliance Officer, Diane Ament, Office of Research Compliance, 2810 Beadshear Hall, (515) 294-3115; [dament@iastate.edu](mailto:dament@iastate.edu)

If you would like to have a copy of this information sheet, please ask the experimenter and one will be provided.

**SPECIFIC STUDY DEBRIEFINGS:**

Thank you for completing this survey about the importance of behaviors. This information is being used to assist in the development of a questionnaire that will help us better understand how people think and behave in ethical situations.

## APPENDIX E

## OBTAINED SCALE STATISTICS

## VIA Scale Descriptives

## Scale descriptions by Subscale (N = 190)

	Mean	<i>SD</i>	$\alpha$
Personal Intelligence	38.19	5.36	.80
Modesty/ Humility	34.76	5.65	.78
Appreciation of Beauty	33.53	7.04	.85
Self-Regulation	34.05	5.5	.69
Citizenship/Teamwork	37.32	5.34	.79
Integrity/ Honesty	39.12	5.22	.80
Prudence	33.05	5.67	.77
Kindness/ Generosity	39.11	5.22	.84

Total scale alpha = .83

Skewness -.221 (sd = .18)

Kurtosis .754 (.36)

## BIDR-6 descriptions

SDE scale:  $n = 190$

Item mean 5.12 (sd = 3.35)

Standardized item alpha: .73

Skewness .724 (sd = .18)

Kurtosis .08 (sd = .35)

IM scale:  $n = 190$

Item mean 4.74 (sd = 2.79)

Standardized item alpha: .78

Skewness .54 (sd = .18)

Kurtosis .19 (sd = .35)

## APPENDIX F

## REVISED VEIS ITEMS

**Benevolence**

1. Carefully consider the needs of others.
2. Hold to the commitments that you make.
3. Treat others as you would like to be treated.
4. When things go wrong take it out on those around you.
5. Only volunteer for someone who can also help you.
6. Help others without expecting anything in return.

**Integrity**

1. Strictly uphold all aspects of academic integrity.
2. Always tell the truth.
3. Returning (or making the best effort to do so) a found wallet.
4. Hold to the commitments that you make.
5. Gain unfair advantage from someone else's mistake.
6. Agree to do something you know you aren't going to do.
7. Manipulate people to get things done when you need to.

**Prudence**

1. Make decisions only after gathering information from different sources.
2. Create a budget to manage your money.
3. Working more for long term satisfaction than for immediate gratification
4. Making a decision without complete information. (40)
5. Act quickly and decisively without too much concern for long term consequences.
6. Act quickly and decisively without too much concern for long term consequences.(44)

**Respect**

1. Observe basic courtesies (like saying please and thank you) where appropriate
2. Refrain from talking during a lecture.
3. Never litter.
4. Try hard to be punctual.
5. Push your way through a crowd when you are in a hurry.
6. If you have something to say, interrupting during a presentation.
7. Allow others to clean up after you.

**Response checks**

1. Walk in three circles around your car to prevent getting a parking ticket
2. Brush your teeth at least once a day

## APPENDIX G

COMPARISON OF RESULTS BETWEEN 74 ITEM  
MEASURE AND 27 ITEM MEASURE

## Reliability

## Internal Consistency

## 74 item

	N (item)	alpha
Benevolence	16	.89
Integrity	18	.85
Prudence	16	.75
Respect	16	.80

## 27 item

	N (item)	alpha
Benevolence	6	.86
Integrity	7	.82
Prudence	5	.66
Respect	7	.73

## Test-Retest

## 74 item

Week	N	Correlation
1	34	.74
2	16	.62
3	12	.92

## 27 item

Week	n	Correlation
1	33	.76
2	15	.56
3	11	.83

## Validity comparisons

## BIDR-6

74 item			
	SDE	IM	
Benevolence	.22	.37	
Integrity	.19	.45	
Prudence	.22	.32	
Respect	.25	.37	

27 item			
	SDE	IM	
Benevolence	.18	.27	
Integrity	.18	.44	
Prudence	.26	.28	
Respect	.23	.36	

## VIA (Convergent)

74 item				
Citizenship/ Teamwork	Integrity/ Honesty	Prudence	Kindness/ Generosity	
<b>.44</b>	.36	.21	<b>.49</b>	
.44	<b>.32</b>	.28	.36	
.39	.32	<b>.33</b>	.29	
<b>.46</b>	.38	.29	.43	

27 item				
Citizenship/ Teamwork	Integrity/ Honesty	Prudence	Kindness/ Generosity	
.33	.35	.18	<b>.43</b>	
.39	<b>.30</b>	.18	.34	
.39	.33	<b>.34</b>	.29	
<b>.39</b>	.32	.24	.33	

## VIA (Divergent)

74 item				
PI	MH	AB	SR	
.18*	.21**	.17*	.13	
.14	.24**	.06	.19*	
.19	.19**	.14	.23**	
.20**	.25**	.22**	.18*	

27 item				
PI	MH	AB	SR	
.19*	.18*	.21*	<b>.09</b>	
.12	<b>.22*</b>	.01	.11	
.12	.19*	<b>.18*</b>	.21*	
<b>.15*</b>	.20*	.15*	.17*	



## VEIS intercorrelations

74 item				
	B	I	P	R
Benevolence	1.00			
Integrity	.82	1.00		
Prudence	.73	.77	1.00	
Respect	.83	.79	.74	1.00

27 item				
	B	I	P	R
Benevolence	1.00			
Integrity	.70	1.00		
Prudence	.62	.58	1.00	
Respect	.68	.64	.60	1.00

## Item analysis

74 item				
Item	Benevolence	Integrity	Prudence	Respect
1	.46	<b>.58</b>	<b>.58</b>	.44
2	.64	.56	.38	.56
3	.61	.44	<b>.51</b>	.50
4	.54	<b>.73</b>	.44	.53
5	<b>.72</b>	<b>.63</b>	.36	.50
6	<b>.67</b>	.52	.53	<b>.60</b>
7	.62	.56	.44	<b>.57</b>
8	<b>.69</b>	.50	<b>.54</b>	<b>.62</b>
9	.44	.47	.47	-.28
10	.62	.47	<b>.57</b>	.44
11	.58	.51	<b>.55</b>	<b>.57</b>
12	.54	.57	.46	.47
13	<b>.69</b>	<b>.66</b>	.01	.53
14	.54	.51	.47	.41
15	.65	.31	.40	<b>.57</b>
16	<b>.69</b>	.57	.44	.56
17	*	.58	*	*
18	*	<b>.66</b>	*	*

27 item				
	Benevolence	Integrity	Prudence	Respect
1	.59	.69	.72	.45
2	.78	.80	.62	.54
3	.74	.73	.62	.69
4	.75	.59	.69	.76
5	.66	.70	.68	.68
6	.53	.47	*	.57
7	*	.74	*	.41

## APPENDIX H

## 74 ITEM VEIS FACTOR MATRIX

	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Item1	.23	-.03	-.06	-.07	-.07	.48	.02	-.22	-.05	.34	-.05	.08
Item7	.43	.15	-.14	.06	.04	.22	-.12	.08	.21	-.01	-.14	.05
Item14	.36	.12	-.09	.04	-.07	.21	-.07	-.05	.13	.09	.02	.11
Item23	.60	-.03	-.10	.10	.04	-.02	.00	-.12	-.09	.02	.14	.18
Item25	.32	.08	-.14	-.16	-.17	.19	-.05	-.01	-.01	.03	.12	.29
Item33	.33	.11	-.22	-.09	-.16	.00	-.12	-.04	.15	-.06	.10	.31
Item35	.24	.07	-.17	-.11	-.29	.01	-.04	.11	.10	.03	.07	.28
Item8	.28	.09	-.03	.19	-.12	.28	-.14	.08	.00	.00	-.12	.06
Item9	.17	.09	.01	.13	.02	.04	-.06	-.03	-.11	.11	-.16	.25
Item11	.10	-.06	.03	.15	.06	.16	.05	.00	-.05	.13	.07	.26
Item19	.08	.18	-.07	-.07	-.35	.23	-.15	-.03	-.15	.05	.04	.23
Item20	.29	.12	-.08	-.10	-.28	.04	-.08	.09	.02	.07	-.04	.28
Item22	.59	-.03	-.05	.07	-.08	.09	-.11	.09	.00	.00	.07	-.01
Item26	.30	.04	-.11	-.04	-.21	.18	-.07	.24	.04	-.06	.02	.14
Item29	.24	.04	.01	-.10	-.35	.10	-.07	.31	.12	-.02	.11	.18
Item37	-.03	.03	.06	.40	.00	.08	.02	-.11	.03	-.11	.14	.24
Item2	.11	-.14	-.06	.10	.08	.56	-.09	-.03	.10	.14	.09	.06
Item4	-.11	.01	-.03	.06	-.02	.60	.03	.06	-.01	-.10	.13	.05
Item10	.20	.01	.08	.20	-.13	.18	-.05	.18	-.02	-.01	.04	.12
Item18	.04	-.04	-.03	.07	.02	.17	-.05	-.02	.06	.00	.07	.21
Item21	.06	-.12	.04	.06	.06	.02	-.72	-.04	.01	-.04	-.04	.01
Item27	.27	.00	-.05	.02	-.10	.12	-.21	.18	.01	-.17	.18	.11
Item31	.11	.00	-.17	.03	-.20	.07	-.07	.01	.06	-.06	.04	.37
VEIS49	.07	.05	-.04	.53	-.12	.08	-.07	-.02	-.06	.01	-.07	.01
Item3	.08	.12	.01	-.03	-.10	.43	-.05	.07	-.06	.04	-.10	.00
Item5	.13	.05	-.03	.13	.01	.48	-.05	.32	.09	-.12	-.17	.07
Item12	.41	.06	-.05	-.13	-.10	.19	-.02	.10	.12	.01	.01	.10
Item16	.28	.18	-.14	.01	-.06	.11	-.07	.06	.27	.02	-.04	.22
Item24	.25	-.04	.08	-.15	-.06	.17	.00	.04	.08	.06	.18	.28
Item28	.29	.03	-.13	-.18	-.26	.05	-.06	.32	.12	-.09	.08	.20
Item32	.02	-.03	-.07	.03	-.03	.00	-.16	.08	.04	-.02	-.02	.52
Item34	-.03	.05	.02	.11	.05	.03	-.03	.04	-.10	.03	-.06	.65
BENR1	.15	.02	-.72	.05	.06	-.04	.04	.07	-.02	-.01	-.09	.00
BENR2	-.02	.04	-.16	-.01	.01	.10	-.13	.05	-.13	.50	-.04	-.01
BENR3	.13	.18	-.22	-.08	.34	.04	-.06	.05	-.26	-.01	.05	.04
BENR4	-.08	-.02	-.82	-.01	-.05	.07	-.03	-.05	.00	.04	.06	-.01
BENR5	.00	.29	-.25	-.03	.20	.04	-.07	-.03	.00	-.01	.12	.06
BENR6	-.11	.26	-.30	-.02	-.12	.08	-.22	.14	.25	.18	.06	.01
BENR7	.13	.59	-.15	.16	.00	-.02	-.05	.05	-.07	.01	.01	-.07
BENR8	.06	.26	-.22	.04	.03	-.01	.01	.16	.23	.25	.15	.09
BENR9	.07	.29	-.06	-.11	.42	.06	-.08	-.02	-.08	-.09	.10	.05
INTR1	.13	-.04	-.20	.04	.17	-.06	.01	.19	-.19	.19	.17	-.06
INTR2	-.05	-.01	-.03	.07	.01	.00	-.11	.05	-.58	.05	.05	.06
INTR3	-.01	.19	-.18	-.10	-.04	.00	-.01	.08	-.19	.08	.08	.13
INTR4	-.07	.46	-.21	.01	.02	.06	-.08	-.02	-.17	-.03	.02	.07
INTR5	-.04	.27	-.02	-.04	-.16	.09	-.36	-.16	-.30	.02	.15	-.10
INTR6	.06	.09	-.01	.02	.12	.03	-.08	-.07	-.12	.04	.44	-.07
INTR7	.06	.31	.01	.07	-.08	-.02	-.15	.06	-.45	-.03	.09	-.04
INTR8	.06	.09	-.13	.10	-.17	-.01	-.07	.32	.12	.35	.20	-.07
INTR9	.01	.61	-.02	.04	-.01	-.01	.00	.00	-.05	.11	.08	.09
PRUR1	-.10	.01	-.20	.31	-.06	-.05	-.04	.12	.01	.19	-.02	-.02
PRUR2	.10	.03	-.20	.12	.17	.09	.00	.22	-.04	.14	.08	-.03
PRUR3	-.25	-.06	-.23	.01	-.03	.19	-.08	.30	-.07	.11	.22	.07
PRUR4	.02	.07	-.01	.24	.02	-.10	-.07	.23	-.11	.10	.08	.09
PRUR5	-.05	-.03	.02	-.07	.44	-.07	-.09	.00	.05	.01	.08	.00
PRUR6	-.09	.01	.02	-.04	.06	-.08	-.73	.00	-.03	.04	.00	.00
PRUR7	-.01	.36	.02	-.06	.09	.13	-.12	-.02	-.12	.13	.22	.00
PRUR8	.01	.29	.03	.08	.04	-.03	-.02	.11	.04	.22	.11	-.01
RESR1	-.12	.06	.10	-.09	.32	-.04	-.01	-.03	-.17	.20	-.31	-.05
RESR2	-.05	-.03	-.17	-.04	-.01	.11	.05	.49	-.17	.05	-.04	.09
RESR3	.03	.04	-.03	-.02	.06	-.10	-.14	.14	-.33	.25	.06	.16
RESR4	-.05	.22	-.11	-.06	.16	-.02	-.04	.13	.09	.16	.09	.11
RESR5	-.05	.17	-.06	.07	-.04	-.07	-.20	-.03	-.04	.30	.01	.11
RESR6	.04	.14	-.03	.02	.11	.03	-.02	.13	-.08	-.01	.35	.01
RESR7	.03	.28	-.05	-.07	-.02	.12	-.03	.37	.12	.11	.05	.00
RESR8	.06	.20	-.21	.11	-.11	-.07	-.02	.10	-.02	.17	.17	.01

Extraction Method: Maximum Likelihood.  
Rotation Method: Oblimin with Kaiser Normalization.

## Total Variance Explained

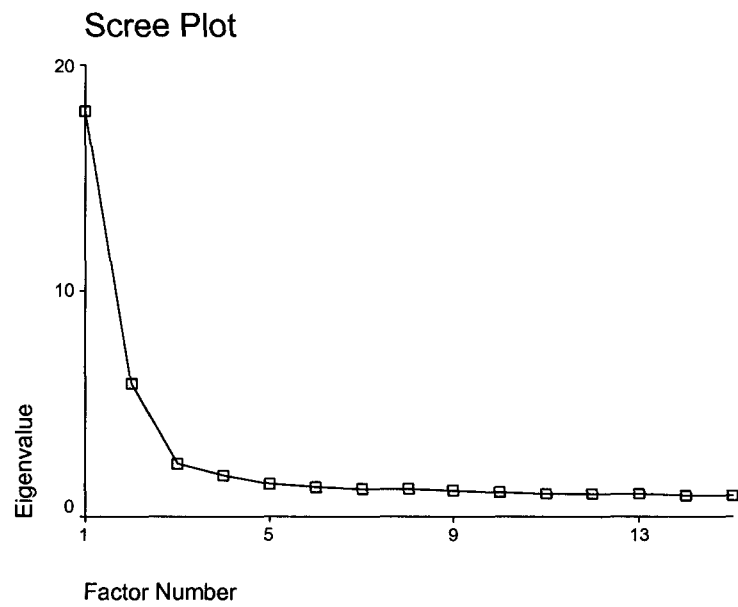
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	17.91	27.14	27.14	17.36	26.31	26.31	9.13
2	5.89	8.92	36.07	5.41	8.19	34.50	7.85
3	2.38	3.61	39.67	1.87	2.84	37.34	9.38
4	1.84	2.79	42.46	1.24	1.87	39.21	2.05
5	1.50	2.27	44.73	.92	1.40	40.61	3.59
6	1.33	2.01	46.74	.75	1.13	41.75	8.09
7	1.28	1.94	48.68	.68	1.02	42.77	6.67
8	1.23	1.86	50.54	.71	1.08	43.85	6.00
9	1.17	1.77	52.31	.65	.98	44.83	2.91
10	1.13	1.71	54.03	.59	.89	45.72	4.58
11	1.05	1.59	55.62	.53	.80	46.52	4.33
12	1.02	1.55	57.17	.48	.73	47.24	9.35
13	1.00	1.51	58.68				
14	.97	1.48	60.15				
15	.93	1.41	61.57				

Extraction Method: Maximum Likelihood.

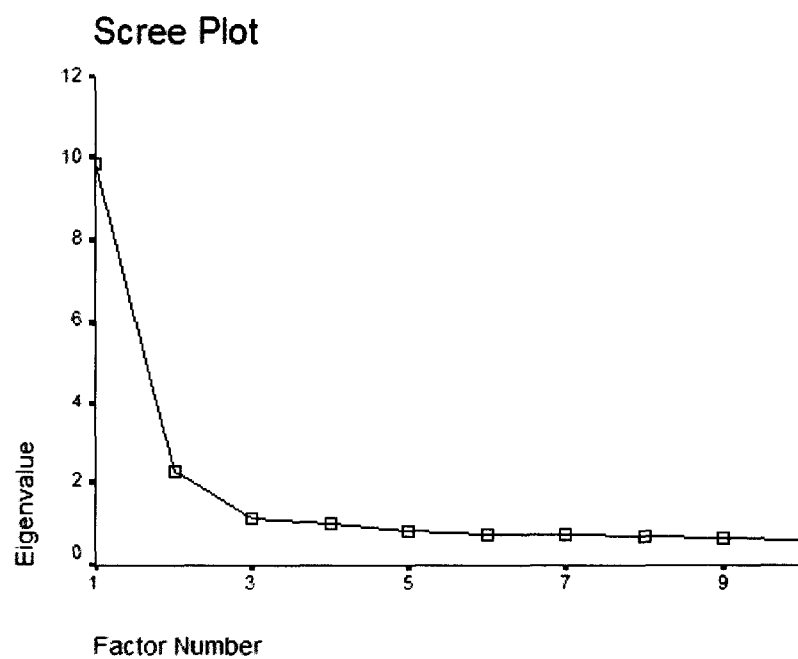
## APPENDIX I

## Scree plots

## 74 item Questionnaire



## 27 item Questionnaire



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